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GYNÆCOLOGICAL THERAPEUTICS

BY

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FOREWORD

No subject is richer in textbooks than Gynæcology. They are mostly large, and mainly surgical, and appeal to a very large extent to the specialist.

The medical aspects of Gynæcology are apt to be overlooked, and this volume seems to me to place at the disposal of the general practitioner, in a compact form, just the information that will be most useful to him. To my mind, Dr. Aarons has produced a volume which is of the greatest practical value.

J. HALLIDAY CROOM.

PREFACE

It may be thought that of books on gynæcology there are enough and to spare, but the great majority of them are mainly devoted to the surgical side of the subject, and the medical treatment is conspicuous by its absence.

It is true that one or two books of American origin have been published purporting to deal solely with the medical aspects of gynæcology, but it will be found that in one at least of these much space is devoted to the description of surgical technique and operative procedure. Both are ponderous tomes, and appeal more to the specialist than to the general practitioner.

It cannot be doubted that gynæcology becomes more and more surgical every day, but has not the pendulum swung too far in this direction? Is it not time that a halt should be called, and that medical treatment should be given a trial before resorting to operation?

In this book I have suggested no treatment other than what I have myself carried out, with the exception, perhaps, of mention of treatment by X rays and radium. I have omitted, for instance, treatment by electrical ionization simply because I have no personal experience of it. I felt that it would detract from whatever value the book might have if I described any form of treatment which I had not myself put into practice. Exception may perhaps be taken to the number of prescriptions recommended for the treatment of one particular complaint, but anyone who has had much experience with, for example, dysmenorrhœa and pruritus will readily understand the difficulty in finding a suitable remedy for such affections.

I have to acknowledge with most grateful thanks the valuable help accorded me in the correction of proofs by my friend Dr. Eardley Holland, and by my friend Dr. Nepean Longridge for seeing the book through the press. My thanks are also due to Sister Stewart, of the Gynæcological Wards of the Royal Infirmary of Edinburgh, for permission to use two of the illustrations from her book on gynæcological nursing. I am indebted to Messrs. J. Bolding and Sons, the Galen Manufacturing Company of New Cross, S.E., Messrs. Gardner and Son of Edinburgh,

Messrs. Krohne and Seseman, Pond's Tampon Company, and Mr. F. A. Rogers of 327 Oxford Street, W., for the loan of blocks for some of the illustrations in this work.

I have tried to make the book as concise as possible—in other words, I have used no " padding " whatever.

As the book is intended for the busy general practitioner, my aim has been to make it easy of reference and clear in direction. I trust that the fruits of my experience may be as useful to him as they have been to me.

S. JERVOIS AARONS.

Harley Street, W.,
September, 1910.

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GYNÆCOLOGICAL THERAPEUTICS

CHAPTER I

AFFECTIONS OF THE EXTERNAL GENITALS

VULVITIS.—Vulvitis is inflammation of the external genitals, and may be acute or chronic. Among the latter the following varieties may be distinguished: follicular, dermato-neuritic, gangrenous, and mycotic.

In **acute cases**, which is the form the practitioner is most likely to be consulted about, the patient should be put to bed for a few days. The parts must be kept scrupulously clean, and douched four or five times daily with Boric Acid (℥i. to Oj.), Bin-iodide of Mercury (1 in 4,000), or Zinc Chloride (gr.v. to Oj.), or they may be painted with a solution of Nitrate of Silver (gr.x. to ℥i.). A mild aperient should be given. The patient should be allowed to sit up for half an hour in a warm bath to which Carbonate of Soda or Bran has been added. Pain may be relieved by hot poultices of Linseed, or by the application of a 2 per cent. solution of Cocaine.

An important point in the treatment is to give clear instructions to the patient, nurse, or mother how to carry out the treatment. It is not sufficient

to say that 'the parts should be douched,' etc.; explicit directions should be given, especially when treating children.

The labia should be held apart, and the nozzle of the syringe should be directed against the separated mucous surfaces, care being taken not to project the fluid with force. It is important not to introduce the syringe into the vagina. After douching, the parts must be carefully dried with pledgets of cotton-wool (these should be immediately burned), and any of the following powders applied by means of an insufflator: Pulv. Amyli, Naphthalene and Calamine, Acid Borici and Zinci, āā ℥ss., or Europhen.

In children it is not advisable to place pads of cotton-wool between the labia; the powder will be sufficient, if well applied, to keep the labia apart. In adults, after the douching, a pledget of wool soaked in Boroglyceride, or Goulard's solution, relieves pain and irritation, but it is seldom necessary when the douching has been thoroughly carried out.

In the mycotic form the urine should be examined for sugar. If this is present, the existing diabetes should be suitably treated. For the local irritation, moist compresses of Boracic Acid (saturated solution) should be applied, or Zinc Ointment may be smeared on the parts, or the following ointment may be used:

℞	Acidi Salicylatis	gr.xv.
	Zinci Oxidi	℥ii.
	Pulv. Amyli	℥i.
	Vaselini Alb.	℥v.

M. Sig.: To be smeared over the affected parts.

If the irritation does not yield to this, try :

℞ Menthol. .. .. gr.ii.
Chloral. Hydratis .. .. .. gr.iv.
Acidi Carbolici .. .. ♏v.
Vernisol. .. .. ad ℥i.

M. Sig. : Smear the paint over the affected parts, and allow to dry.

As the skin in this condition is particularly dry, powders should not be prescribed.

In **chronic cases** astringent solutions should be applied, such as Sulphate of Copper (1 per cent.) ; Tannin (1 in 40) ; Carbolic (1 in 40) ; Corrosive Sublimate (1 in 4,000).

Ointments are not very much used ; they are, however, certainly beneficial where there is an irritating discharge.

℞ Adipis Lanæ .. ..
Adipis Præp. .. .. āā 1 part.
Paraff. Mollis Alb. .. .. ..

M. Sig. : Apply to the affected parts.

Or—

℞ Unguent. Zinci .. .. ℥i.

M. Sig. : Apply to the affected parts.

Or—

℞ Zinci Boratis .. .. ℥i.
Ichthyol. .. .. ℥ss.
Unguent. Hydrarg. Ammon. .. .. āā ℥iv.
Unguent. Lanolini .. .. ..

M. Sig. : Apply to the affected part.

FOLLICULAR VULVITIS is inflammation of the sebaceous follicles of the vulva. It is more commonly seen in pregnant women, and is due to pruritus, dirt, and scratching.

It should be treated much on the same lines as simple chronic vulvitis. The patient should be warned about scratching, as the papules which accompany this form may be inoculated with pathogenic organisms and become pustules. Should this occur, the latter should be opened, and antiseptic compresses applied.

ECZEMA of the vulva may be acute or chronic, and occurs most frequently in pregnancy. It is said to be due to rheumatism and gout, but it is more probably caused by parasitic micro-organisms. The chronic condition is the form more frequently met with. In the acute stage alkaline warm baths and warm compresses soaked in Liq. Plumbi Subacet. (℥ss. to each pint of water) should be ordered. When scabs have formed, the following ointment may be applied :

℞ Pulv. Camphoræ .. .. .. gr.viii.
Zinci Oxidi .. .. ℥i.
Adipis Benzoatis .. .. .. ℥i.

M. Sig. : Apply to the affected parts.

Or—

℞ Cremoris Frigidi .. .. ℥ii.
Zinci Oxidi .. .. ℥ii.
Calaminæ Præparatæ .. .. .. ℥i.

M. Sig. : Apply to the affected parts.

In the more resistant cases—

℞. Liq. Carbonis Deterg. .. .. .. ℥i.
Hydrarg. Ammon. Chlor. .. .. gr.x.
Lanolini .. .. ℥i.
M. Sig.: Apply to the affected parts.

Internally, arsenic is of value; it should be given in full doses, beginning with 2 minims of Liq. Arsenicalis immediately after each meal, and gradually increasing until, in about a fortnight, 8 minims is reached. Reduce the dose if there is evidence of disagreement—*i.e.*, irritation of conjunctivæ or dyspepsia. It may be combined with iron if there is anæmia.

It must be borne in mind that eczema may be due to diabetes, so that the urine should be examined in order to exclude this form.

HERPES ZOSTER is an herpetic eruption similar to herpes labialis. Herpes zoster, it should be remembered, usually affects only one labium. In the earlier stages the vesicles should be painted with collodion. If large blebs form, these should be opened with due aseptic precautions, and then dusted with an antiseptic powder, such as the Subgallate of Bismuth. If there is much pain when the blebs have been opened, Orthoform may be added.

℞ Bismuthi Subgall. .. .. .. partes 9.
Orthoform. .. .. partem 1.
M. Sig.: To be dusted on the affected parts.

NOMA is a gangrenous condition similar to cancrum oris, and is seen mainly in children, practically

never in adults. The treatment consists in free removal of the whole of the diseased tissue with the knife, the application of fuming Nitric Acid, or thermo-cautery. The parts must be kept clean after removal by antiseptic washes, such as weak solutions of Hydrogen Peroxide. The treatment of the general condition is most important ; free stimulation by Alcohol (4 to 5 ounces of Brandy in the twenty-four hours), easily assimilable and abundant nourishment, such as strong soups, egg beaten up in milk, are indicated.

ESTHIOMÈNE (so-called 'lupus of vulva').—The hypertrophied portions should be removed by the knife, or, better, with a Paquelin's cautery. The ulcerated area should be thoroughly scraped, and powdered over with Iodoform, Europhen, Aristol, or Subgallate of Bismuth.

HÆMATOMA is due to a subcutaneous rupture of veins in the labia majora, and is nearly always, in the non-pregnant conditions, due to trauma. If small, a firm compress secured with a T bandage will be all that is necessary ; an ice-bag may also be applied. If the hæmatoma is enlarging, lay open the cyst, clear out the clot, tie any bleeding points, pack the cavity tightly with cyanide gauze, and secure with a T bandage.

DERMAL VULVITIS.—By this is meant a simple dermatitis or intertrigo, commonly seen in fat women, between the labia majora and the thighs The inflamed parts should be bathed with warm

water and a super-fatted soap, carefully dried, and dusted with the following :

℞ Emol. .. .. ʒi.
Zinci Oxidi .. .. ʒi.
Amyli .. .. ʒii.

M. Sig. : To be dusted on the affected parts.

Or the following :

℞ Zinci Stearatis .. .. } āā ʒi.
Plumbi Stearatis .. .. .. }
Bals. Peru. .. .. ɱx.

M. Sig. : To be applied to the affected parts.

PEDICULI. — The parts should be shaved, and thoroughly washed and cleansed with a solution of Biniodide of Mercury (1 in 2,000). If this is objected to, the parts should be thoroughly washed with soap and warm water, and dried, and then dabbed with a pad of cotton-wool soaked in Chloroform, and the following ointment rubbed in :

℞ Ung. Hydrarg. Ammon. .. .. ʒss.
Lanolini .. .. ʒi.
Bals. Peru. .. .. ʒss.

Or the unguent Staphisagriæ may be used.

KRAUROSIS VULVÆ is an atrophic shrinking of the vulva, the nymphæ being first affected, the disease subsequently spreading to the labia majora and perineum. The skin appears dry and shrunken, and has a glistening appearance, like scar tissue, pale, and marked with reddish-brown spots ; the hair is thin and dry, and later is entirely

absent. Sedatives and cooling lotions should be applied :

℞ Ammon. Chlorid. .. .. .. ℥i.
Spirit. Vin. Rect. .. .. .. ℥ii.
Spirit. Ætheris .. .. ℥i.
Acid. Acetic. .. .. ℥iss.
Aq. Dest. .. .. ad ℥xii.

M. Sig. : Apply on lint to the affected part.

Or—

℞ Plumbi Acetat. .. .. gr.iv.
Pulv. Opii .. .. gr.iv.
Aq. Dest. Bullient. .. .. .. ad ℥i.

M. Sig. : Let stand six hours, then filter and apply on lint.

In severe cases the only way of affording relief is the free excision of the diseased tissue.

ELEPHANTIASIS.—Removal with knife and cautery.

WARTS.—If small, they may be removed by carefully applying Acid Nitrate of Mercury or Glacial Acetic Acid. If the wart is large, the base should be ligatured for a day or so, and then removed with a pair of scissors.

VARIX.—The cause of 'back pressure' should be treated. Rest, with legs raised, should be ordered. If this condition persists after removal of the cause—*e.g.*, pregnancy, pressure on pelvic veins by tumour—it may be necessary to excise the varicose veins.

CHANCRE.—The parts should be kept thoroughly clean by washing with antiseptic douches night and morning—Biniodide of Mercury (1 in 4,000) or the Perchloride of Mercury (1 in 2,000) may be used.

The vulva should be bathed several times daily with Lotio Nigra, or this should be applied on lint. The parts should then be carefully dried, and Iodoform dusted on the sores. If the smell of Iodoform be objected to, the following powder may be used :

℞ Calaminæ .. .. } equal
Hydrarg. Subchlor. .. .. .. } parts

M. Sig. : To be dusted on the affected parts.

CONDYLOMATA.—The parts should be kept scrupulously clean ; the patient should use mercurial applications night and morning—Biniodide or Perchloride, as above. After the parts have been carefully dried, the Calamine and Calomel Powder should be dusted on the mucous patches, or the following may be ordered :

℞ Hydrarg. Subchlor. .. .. .. } equal
Cretæ Preparatæ .. .. .. } parts
Acidi Tannici .. ..

M. Sig. : To be dusted on the affected parts.

In both chancres and condylomata the patient should be given a course of Mercury.

The following plan of giving Mercury with Iron will be found extremely valuable, as the patient can be kept under the influence of Mercury without being salivated.

℞ Hydrarg. c. Creta .. .. .. } āā gr.ss.
Ferri Sulph. Ex. .. ..

M. Ft. pil. Sig. : One pill to be taken three times a day. Every third day increase one pill until a distinct metallic taste appears in the mouth, then half the dose should be taken for two years.

For example, the patient commences by taking one pill three times a day ; on the fourth day, four pills ; on the seventh day, five pills ; on the tenth day, six pills ; and so on until a metallic taste is experienced ; then half the quantity is the permanent dose.

The patient should be instructed to burn all dressings, pads, etc., and to disinfect the hands after touching the parts. Everything used by the patient should be kept for her sole use.

CARCINOMA
SARCOMA
FIBROMA
LIPOMA
} Removal.

For treatment of inoperable carcinoma and sarcoma, see p. 46.

CYSTS should be opened and dissected out.

PRURIGO is a condition associated with intolerable itching, and characterized by the presence of a papular eruption, due to dilatation of the lymphatics in the hypertrophied papilla, causing irritation in the nerve-endings of the skin. Improvement of the general condition of the patient must be aimed at : good feeding, plenty of fatty foods, cod-liver oil, malt, iron, arsenic, quinine, being indicated.

The following prescriptions should be used :

℞ Tinct. Ferri. Perchlor. .. .. .. ♏xv.
Liquor. Arsenici Hydrochlor. .. .. ♏ii.
Infus. Quassiæ .. .. ad ℥ss.

M. Sig. : A tablespoonful in water three times daily after food.

Or—

℞ Ferri. et Quin. Cit. .. .. .. gr.v.
Glycerini .. .. ♏xx.
Spr. Chloroformi .. .. .. ♏x.
Aq. Dest. .. .. ad ℥ss.

M. Sig. : A tablespoonful in water three times daily before food.

Locally—

℞ Menthol .. .. ℥i.
Paraff. Liq. .. .. ad ℥i.

M. Sig. : To be painted on the affected parts.

Or—

℞ Creasoti .. .. ℥ss.
Cocainæ .. .. gr.v.
Lanolini .. .. ad ℥iss.

M. Sig. : To be smeared over the affected parts.

PRURITUS is constantly confused with prurigo, but pruritus is a feeling of constant itching without the presence of the papules which characterize prurigo. The causes of pruritus are exceedingly numerous—gout, diabetes, jaundice, chronic nephritis ; morphia and the alcohol habit ; discharges from the vagina, uterus, and bladder ; parasites (*i.e.*, pediculi, ascarides). It is often met with in pregnancy. It will be evident, then, that pruritus is only a symptom of many diseases, and the cause must be carefully inquired into and treated. One of the first and most important steps is to make a thorough examination of the urine ; in addition, scrupulous cleanliness, thorough washing of the parts, and the application of sedative lotions, such as a weak solution of Liq. Plumbi Subacetatis.

Irritating vaginal discharges must be treated with appropriate douches (*cf.* p. 123). The patient must be warned not to scratch the parts, and it is a good plan to recommend drawers to be worn at night to prevent this.

Local treatment, even when no cause can be found, often gives relief; but the practitioner must bear in mind that what will cure one patient may have no effect upon another. A dozen formulæ may be tried before hitting on the right one. The general health must be attended to. Alcohol should be avoided. Arsenic internally sometimes does good, also Cannabis Indica. Baths are to be strongly recommended—alkaline, or bran, or sea-salt—and should be taken just before bedtime. After thorough drying, the parts may be dusted over with the following powder:

℞ Pulv. Acid. Salicylic. .. .. .. gr.xx.
Pulv. Amyli .. .. ʒii.

Painting the parts with strong solution of Carbolic Acid, Tincture of Iodine, or Nitrate of Silver, have been tried with varying success.

Any of the following ointments may be used:

℞ Menthol. .. .. ʒi.
Ol. Olivæ .. .. ʒiii.
Chloroformi .. .. ʒi.
Lanolini .. .. ʒiii.

M. Ft. unguent. Sig.: Apply as directed.

℞ Cocainæ Hydrochlor. .. .. .. gr.v.
Zinci Oxidi .. .. ʒi.
Lanolini .. .. ʒi.

M. Ft. unguent. Sig.: To be smeared over the affected parts.

℞ Cocain. Hydrochlor. .. .. .. gr.x.
Glycerini .. .. ʒi.
Spt. Vin. Rect. .. .. ʒii.
Aq. Rosæ.. .. .. ad ʒi.

M. Sig.: To be painted on the affected parts.

℞ Cocainæ .. .. gr.x.
Unguent. Conii .. .. ʒi.

M. Ft. unguent. Sig.: To be applied to the affected parts.

℞ Lysoformi .. ..
Paraffini Mollis .. .. āā ʒss.
Lanolini Puri. .. ..

M. Ft. unguent. Sig.: To be applied to the affected parts.

℞ Ichthyol .. .. gr.xx.
Lanolini .. .. ʒii.

M. Ft. unguent. Sig.: To be smeared on the affected parts.

℞ Liq. Carbonis Deterg. .. .. .. ʒi.
Hydrarg. Ammon. Chlor. .. .. gr.x.
Lanolini .. .. ʒi.

M. Ft. unguent. Sig.: To be applied to the affected parts.

℞ Ichthyoresorcini .. .. .. ʒi.

M. Ft. unguent. Sig.: Apply to the affected parts.

The following lotions may be used:

℞ Zinci Oxidi .. .. ʒii.
Glycerini .. .. ʒii.
Aq. Rosæ.. .. .. ad ʒxii.

M. Ft. Lotio. Sig.: Apply on a pad of cotton-wool.

℞ Zinci Oxidi .. .. ʒii.
Calaminæ.. .. .. ʒii.
Glycerini .. .. ʒii.
Eau de Cologniensis .. .. .. ʒi.
Aq. Dest. .. .. ad ʒxii.

M. Ft. lotio. Sig.: To be applied with a pledget of wool and allowed to dry.

In order to insure a good night's rest, it may be necessary to give drugs, such as Chloralamide, Veronal, Trional, or Urethane, which induce sleep. It is better to give the patient the drug than to entrust her with a prescription.

The use of a weak galvanic current is well worth trying. Excellent results have been recorded by several well-known authorities. The anode is placed on the back, and the cathode moved over the affected areas.

Finally, there are some cases which resist all forms of local applications and internal remedies. It then becomes necessary to remove the affected areas completely.

HYMEN

ATRESIA.—See Atresia of Vagina.

CARUNCULÆ are to be distinguished from urethral caruncles (*cf.* p. 58). They consist of tags of the hymen which are left when that structure has been ruptured. If giving rise to pain on coitus, free removal with knife or cautery is the best treatment.

CYSTS.—Small cysts lined with epithelium are occasionally seen in the hymeneal tissue. Excision is the only treatment.

BARTHOLINIAN GLANDS

ABSCESS in Bartholinian glands is distinguished from a cyst by the presence of acute pain, heat, and redness. The abscess should be opened ; if the gland

can be found, it should be dissected out, the wound packed with gauze, and allowed to heal from the bottom.

CYSTS usually arise in the duct. When the occlusion of the duct is not complete, the swelling may exist for only a day or two, and be followed by a discharge of fluid, mucoid in character. If the duct is closed completely, the swelling recurs. The contents of the cyst then become viscid, watery, or grumous. The cyst should be carefully dissected out, any bleeding points should be tied, the cavity stitched up, and a small drain of gauze inserted in the most dependent part.

CHAPTER II

AFFECTIONS OF THE VAGINA

ATRESIA.—The most common form of atresia of the vagina is due to a thin transverse septum just above the hymen. The vagina may be closed at its lower base or throughout its whole extent. The vagina may be entirely absent. The treatment of atresia vaginæ, with its resultant hæmatocolpos and hæmatometra, is surgical.

CYSTOCELE is a prolapse of the anterior vaginal wall, carrying the posterior wall of the bladder with it, and forming a smooth rounded swelling, which protrudes through the vulva when the patient strains. This is a condition for which patients frequently seek advice, calling it 'falling of the womb.'

RECTOCELE is a prolapse of the posterior vaginal wall, carrying the anterior wall of the rectum with it. In character it resembles a cystocele, except that it is on the posterior wall of the vagina. Rectocele is frequently associated with a torn perineum. The treatment may be divided into palliative and operative. The former is carried out by means of rest in bed for a few days, with antiseptic douches,

a vaginal tampon of Glycerine, and the insertion of a ring or cup-and-stem pessary.

Operative treatment is nearly always indicated when a ring pessary fails to give relief. The perineum, if torn, should be repaired, and an anterior and posterior colporrhaphy performed.

FOREIGN BODIES.—All sorts and conditions of things have been found in the vagina. Some have been inserted from mere curiosity, and others with a view of producing erotic sensations, to prevent conception, to allay irritation, etc. In the feeble-minded it would seem that the vagina is looked upon as a repository, so numerous are the articles introduced by this class of patient. Pessaries which have been introduced by medical men, and have been entirely forgotten, are a common cause of foreign bodies giving rise to trouble.

It may safely be said that when an otherwise healthy young woman seeks advice for a foul, purulent discharge, it is almost certain that there is some foreign body in the vagina.

The foreign body should be removed as soon as it is discovered ; the vagina should be freely douched with weak antiseptics. When vaginitis has been caused as a result of the continued irritation, the condition should be treated as described under that heading. Sometimes it will be found impossible to remove the foreign body without anæsthetizing the patient.

After removal, and when the vagina has been

thoroughly cleansed, the parts should be carefully examined for any fistulous opening which the long-retained foreign body may have produced.

TUMOURS.—Removal.

VAGINITIS.—Inflammation of the mucosa of the vagina.

(*a*) **Simple Vaginitis,** usually due to injury from violence—*e.g.*, excessive coitus. Treatment should commence with rest in bed for a few days. The patient may lie in a warm bath to which Carbonate of Soda has been added. When the acute stage has passed, mild astringent douches may be employed.

℞ Zinci Sulphatis .. .. ʒss.-O.i.

Warm sedative douches may also be employed (Boracic Acid, ʒi. to O.i., or Liq. Plumbi Subacetatis, ʒii. to O.i.), followed by a pessary of Lead and Opium.

℞ Plumbi Acetatis .. .. gr.v.
Opii .. .. gr.ii.
Ol. Theobrom. .. .. ad ʒi.

M. Ft. pessus. Sig.: To be inserted into the vagina.

Sexual intercourse must be prohibited. The bowels should be kept freely open with saline purgatives.

℞ Magnesii Carb. .. .. ʒss.
Magnesii Sulph. .. .. gr.x.
Aq. Menthæ Pip... .. .. .. ʒss.

M. Sig.: To be taken with an equal part of water.

(*b*) **Chronic Vaginitis** is the commonest form met with in adults, and requires very vigorous treatment.

If there is much pain and swelling, with accompanying vulvitis, it is better to let the patient have a warm alkaline bath, and douche either with plain boiled water or linseed tea, and afterwards insert a pessary containing Belladonna (gr.ii.) or Cocaine (gr.ss.).

It is better to anæsthetize the patient, and employ the lithotomy position; thoroughly douche the

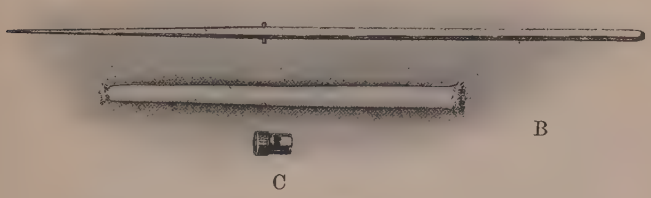

FIG. 1.—AUTHOR'S UTERINE PROBE AND MOP.[1]

A, Probe; B, the mop; C, catch to fix mop in position.

FIG. 2.—UTERINE MOP FIXED ON PROBE.

vagina with a solution of Cyllin (℥i. to O.i.); swab the vaginal walls with a mop dipped in the same solution (or in Biniodide of Mercury, 1 in 2,000). Care should be taken to go into the sulci of the vagina. Then take a uterine mop (Fig. 1) and swab out the uterine cavity with pure Cyllin or Iodized Phenol; again douche the vagina, and pack

[1] These mops are manufactured and supplied by the Galen Manufacturing Company.

lightly with Cyanide gauze—this may be left in for twenty-four hours. After removing the gauze, give douches of either Cyllin (℥i. to O.i.), Biniodide of Mercury (1 in 4,000), or Lysol (℥ii. to O.i.), night and morning.

If the condition does not respond to the treatment recommended above, it is a good plan to swab the vagina and cervix thoroughly with a solution of Nitrate of Silver (10 per cent.), or Protargol (15 per cent.), or Argyrol (20 per cent.).

Yeast has been used comparatively recently with good results. The yeast must be fresh, and is used in the following manner : The vagina is thoroughly douched with plain boiled water ; after the secretion has been removed, two teaspoonfuls of yeast with one teaspoonful of Grape-Sugar solution is injected into the vagina through a tubular speculum as high up as possible. (It is better to have the patient in the lithotomy or knee-elbow position.) After a few minutes a tampon of cotton-wool saturated with the Grape-Sugar solution is passed into the vagina, and left there for ten hours, and at the end of this time the tampon is removed and a douche given. The treatment is repeated every forty-eight hours.

(*c*) **Senile Vaginitis.**—Alkaline douches, such as—

℞ Sodii Bicarb. .. .. ℥ii.-O.i.

and Pessaries of Borax :

℞ Boracis .. .. gr.xv.
Ol. Theobrom. .. .. ℥i.
M. Sig. : To be inserted into the vagina after the douche.

(*d*) **Purulent Vaginitis.**—First douches, to clear away the discharge ; then swabbing the vagina with Cyllin (℥ii. to O.i.) or Lysol (℥iv. to O.i.). Pack the vagina with gauze, then mild antiseptic douches twice daily. Some of the discharge should be collected on a sterile swab, so that the micro-organism causing the discharge may be identified, and, if necessary, a vaccine prepared.

(*e*) **Granular Vaginitis.**—Douche the vagina with plain boiled water ; gently dry with gauze mops ; then thoroughly swab the vaginal walls with Chloride of Zinc solution.

℞	Zinci Chloridi	gr.xl.
	Glycerini	℥ss.
	Aq.	ad ℥ii.

(*f*) **Membranous Vaginitis.**—Mild sedative douches ; Boric Acid (℥ii. to O.i.). Pack the vagina lightly with Cyanide gauze. This should be done daily to prevent cicatricial contraction.

(*g*) **Emphysematous Vaginitis.** — Astringent douches.

℞	Zinci Chlorid.	gr.x.-O.i.

Prick the blebs to let the gas out.

VAGINISMUS.—By this is meant a condition of hyperæsthesia, with spasmodic contraction of the muscles surrounding the vaginal orifice, whenever coitus is attempted, or when the gynæcologist attempts to make a digital or instrumental examination. The condition is chiefly found in young

neurotic and hysterical women, and may be due to a variety of local and pathological conditions. The cause must first of all be determined, and the only way of doing this is by a thorough local examination. As this, owing to the sensitiveness of the parts, is usually painful, it is wise to insist upon an examination under an anæsthetic ; it is useless to attempt it otherwise. If a local cause is discoverable, it is better to remove it at the time of the examination.

The vulva is first of all examined ; tender carunculæ myrtiformes, fissures, or sores, are looked for. The hymen—is it ruptured ? If not, is it dilatable, or hard and unyielding ? Is it inflamed ? What is the condition of the urethral orifice ? Is there a caruncle ? Next note the vaginal orifice : is there any spasmodic contraction of the sphincter vaginæ on inserting the finger ? Is there vaginitis ? Is the vagina small ?

The cause not infrequently exists in the husband being impotent ; but, in spite of this, inefficient attempts at coitus are made which often produce hyperæsthesia of the parts in the woman, and so cause vaginismus.

If no local cause can be found, the following plan may be tried : The patient may be told to apply a pad of cotton-wool, soaked in a 10 per cent. solution of Cocaine, to the introitus vaginæ, and to leave it there for fifteen minutes before coitus takes place. After removing the pad, the parts should be smeared with Vaseline ; coitus should then be attempted.

If this is satisfactory, the same plan should be tried on successive occasions, and then the Vaseline alone used.

If this plan does not succeed, the orifice may be gradually stretched by dilators of increasingly large size ; these should be worn for an hour or two daily.

Should both these methods fail, then forcible dilatation under an anæsthetic should be performed, either with large-size Hegar's dilators or the fingers. After stretching, a well-vaselined dilator may be tied *in situ*, and removed in a few hours ; the patient should then pass graduated dilators, and wear one for a few hours daily (see Fig. 3). In many cases, however, it will be found necessary to excise the hymen and divide the sphincter vaginæ, followed by the wearing of a dilator.

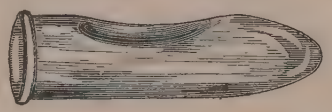

Fig. 3.—Vaginal Dilator or Rest.

CHAPTER III

AFFECTIONS OF THE UTERUS

ENDOCERVICITIS.—Endocervicitis is an inflammation of the cervical mucosa, and in some respects resembles endometritis, but is practically never an extension of the latter. Cervical inflammation is due to extension of inflammation from the vulva and vagina (bacterial, especially gonococci). The predisposing causes are injuries to the cervix, a laceration following child-birth, careless instrumental examination, foreign bodies, polypi, excessive coitus. It should be remembered that, while the normal endometrium is practically free from bacilli, the cervical canal is easily reached by them, and the glands of this structure are readily infected.

In the first place, it is of the greatest importance to attend to the general health of the patient. The diet should be well regulated ; the bowels should be kept freely open by the use of salines, such as Hunyadi Janos, Rubinat, Friedrichshall, etc. Rest on the back for a couple of hours a day, with the legs raised, is beneficial ; it is neither necessary nor desirable in the milder forms to confine to bed. Regular exer-

cise in the open air should be encouraged ; gentle walking, indoor exercises with Indian clubs, dumb-bells, and passive resistance exercises are all beneficial. General massage is also to be recommended.

The exercises should be diminished, but not discontinued, during the menstrual epoch, and a greater amount of rest is required.

The patient should have a daily warm bath of salt water ; if this is not available, sea-salt can be substituted, followed by a brisk rubbing.

Coitus should be avoided.

A course at one of the spas is to be recommended —Woodhall Spa, Kreuznach, Ems, Kissingen, Schwalbach. When these are not possible, treatment at home should be undertaken.

Vaginal douching is of the first importance, and should be carried out morning and evening (see p. 120). At night, after the douche, a pessary containing 10 per cent. Ichthyol and Gelatine may be inserted and retained all night. A very useful application is the cupule (Fig. 4) of Ichthyol and Gelatine (10 per cent.) ; this is pushed over the cervix.

In the more severe cases it is necessary to put the patient to bed for ten or fourteen days, or even longer. Instructions should be given to douche for twenty minutes morning and evening with water to which either Kreuznach Salts (℥i. to O.i.), Tincture of Iodine (♏i. to O.i.), Sulphate of Copper (♏i. to O.i.), or Woodhall Spa water (℥i. to O.i.) has been added. At night a tampon of Ichthyol and Glycerine

(10 per cent.) should be inserted (see p. 128), or Tincture of Iodine may be painted on the cervix, which must be thoroughly cleansed and dried, as

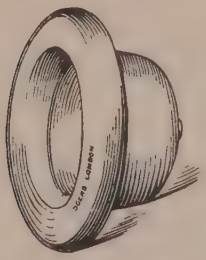

FIG. 4.—SIDE VIEW OF CUPULE.[1]

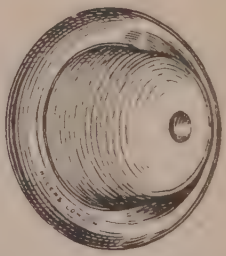

FIG. 5.—END VIEW OF CUPULE.

the mucus would otherwise prevent the medicament from acting on the organ. Very handy sponges for this purpose are the little rolls of cotton-wool used

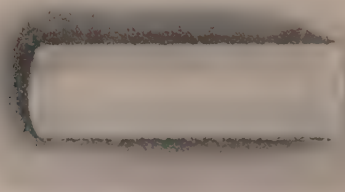

FIG. 6.—ROLL OF COTTON-WOOL SIMILAR TO THAT USED BY DENTISTS.

by dentists (Fig. 6); they are put up in sterilized packets, and may be used both for clearing away the mucus and applying the medicament. Care

[1] These cupules are made and supplied by F. A. Rogers.

must be taken not to drop any of the solution on to the vaginal mucous membrane, so it is advisable to protect this surface while applying the Iodine and afterwards. This is best done by putting in a plug of cotton-wool steeped in Glycerine.

If it should be necessary to apply the medicament to the interior of the cervical canal, the uterine mop (Fig. 1) may be used, followed by the Glycerine plug. If there is much erosion, the curette may be used, and the parts afterwards swabbed with Iodized Phenol.

If there is marked laceration of the cervix, with catarrhal patches, Emmet's or Schroeder's operation should be performed.

On no account should the solid stick of Nitrate of Silver be used in the extensive manner in which it was formerly employed ; it results in extensive destruction, leaving cicatricial tissue, which, in the event of pregnancy, gives rise to serious complications, owing to rigidity of the cervix.

ENDOMETRITIS is an inflammatory affection of the uterine (corporeal) mucosa, and is due to pyogenic organisms. It is very commonly an extension of endocervicitis.

Among the predisposing causes may be mentioned careless treatment of abortion or puerperium, the passage of unclean instruments into the uterus, cold during the menstrual period. A not infrequent cause of endometritis is the habit indulged in by certain women who, for the purpose of pre-

venting conception, use cold vaginal douches after coitus.

Treatment — *Acute.* — Rest in bed, with hot fomentations over the lower abdomen. The bowels should be opened, preferably with an enema. If pain is acute, opium should be given. No local treatment is to be undertaken until the acute symptoms have subsided.

Chronic.—Begin with hot douches with Tincture of Iodine (℥i. to O.i.) ; give Ergot by the mouth.

℞ Ergotin. .. .. gr.iii.
M. Sig. : In pill or tablet twice daily.

If the uterine cavity is enlarged, pass the uterine mop (Fig. 1) dipped in Iodized Phenol.

In slight cases this will often effect a cure ; in more chronic cases it is necessary to curette the uterus thoroughly, swab with Iodized Phenol or pure Carbolic, and drain with gauze ; or a uterine mop may be left *in situ* for twenty-four hours, followed by daily douching. The patient should be kept in bed for ten days.

METRITIS.—This term is used for inflammation of the muscular substance of the uterus (myometrium). Inflammation, when it attacks the uterus, usually begins in the endometrium, and may then spread to the myometrium.

Predisposing causes are to be found in displacements, parturition and abortion, faulty pessaries, excessive coitus, and chills at the menstrual epoch.

The first and most important point is to diminish the passive congestion of the pelvic organs, and this may be obtained by rest for a few hours daily, and hot douching morning and evening. A course at one of the spas, such as Kreuznach, Wiesbaden, or Woodhall Spa, is to be recommended. The drinking of these waters, or of those of Ems and Vichy, is also of great service. If these resorts cannot be visited, douches of Woodhall Spa water or Kreuznach Salts at a temperature of 115° F. should be given night and morning.

The bowels should be kept freely opened, and the following prescription acts both as an aperient and as a tonic.

℞ Magnesii Sulphat. .. .. .. ℥i.
Quin. Sulphat. .. .. gr.ii.ss.
Ferri Sulphat. .. .. gr.ii.
Acid. Sulph. Dil. .. .. .. ♏x.
Aq. Menth. Pip. .. .. .. ad ℥ss.

M. Sig.: A tablespoonful in water night and morning.

Counter-irritation by blisters or Iodine to the iliac regions does good.

At the menstrual period the patient should stay in bed, and if the flow is at all profuse the following may be given:

℞ Hydrastin. Hydrochlor. .. .. } āā gr.¼.
Cotarnin. Hydrochlor. .. .. ..
Ext. Ergotæ .. .. } āā gr.½.
Cannabin. Tannatis .. .. ..

M. Ft. Tabloidi. vel Palatinoid. Sig.: One three times daily.

SUBINVOLUTION.—When the uterus after labour returns to nearly the size it was before pregnancy, we speak of 'involution of the uterus.' Failure of a return of the organ to this size is called 'subinvolution.' Among the causes of subinvolution are severe and prolonged labour, post-partum hæmorrhage, retained membranes or portions of placenta, puerperal sepsis, and pelvic inflammation.

Treatment—*Prophylactic.*—During parturition, by making certain that no part of placenta or membranes are left behind, and that the uterus is firmly contracted. If there should be any atony of the uterus during parturition, i would be wise to give Ergot every day while the patient is lying in. The patient should not be allowed up too soon.

Curative.—The patient should be put to bed. Hot vaginal douches with Tincture of Iodine (℥i. to O.i.) should be given twice daily. If there should be any accompanying pelvic inflammation, Ichthyol 10 per cent. plugs (see p. 128) or ovules (see p. 147) should be inserted after the evening douche. Internally, Ergot and Hydrastin in palatinoid or tabloid form (see p. 29) should be given three times daily. If there is any tendency to anæmia, Ergot may be combined with Iron.

℞	Ext. Ergotæ Liq.	♏xx.
	Tinct. Ferri Perchlor.	♏xv.
	Elixir. Aurantii	℥ss.
	Aq. Dest...	ad ℥ss.

M. Sig.: A tablespoonful in an equal part of water three times daily after food.

In those cases of subinvolution associated with a flabby, soft uterus and low-tension pulse an injection of Pituitary Extract (infundibular portion, see p. 79) once or twice a week will materially help to reduce the uterus to its proper size.

SUPERINVOLUTION.—By this is meant that the uterus has become smaller than it was before pregnancy. This is termed by some 'puerperal atrophy.' It is caused by repeated pregnancies at short intervals, over-lactation, and post-partum hæmorrhage. The only symptoms for which the patient is likely to seek advice are acquired sterility and complete or partial amenorrhœa.

Treatment —*Prophylactic.*—Lactation should not be allowed to be prolonged. Pregnancy should only occur at longer intervals.

Medicinal.—Once the condition of superinvolution is found to exist, a cure is seldom to be expected. Tonics, such as Iron and Strychnine, plenty of fresh air, and nourishing and easily assimilated food, are indicated.

UTERINE DISPLACEMENTS

ANTEVERSION.—Normal position of uterus, and needs no interference.

ANTEFLEXION.—Slight anteflexion is also a normal condition, and, unless it is very acute, gives rise to no symptoms. If the flexion is so marked as to give rise to dysmenorrhœa, treatment may be necessary (see p. 88).

LATEROVERSION is due to a condition outside the uterus—*i.e.*, the organ is pushed or pulled over—and the treatment should accordingly be devoted to the cause (*e.g.*, pelvic inflammation or new growth).

PROLAPSE OR DESCENT OF THE UTERUS is seen in different degrees—

1st. The uterus is low, but entirely in the vagina.

2nd. The cervix descends to, but not outside, the vulva.

3rd. The uterus protrudes through the vulva (this is termed ' procidentia ').

The causes may be classified as follows :

1. Pressure from above—increased abdominal pressure from tumour, ascites, straining, etc.

2. Weakening and relaxation of the supporting structures of the pelvic floor—*i.e.*, torn perineum, patulous vulva, atrophy of the pelvic floor.

3. Increased weight of uterus—pregnancy, uterine tumours.

4. Traction from below—hypertrophic cervix, cervical tumours, etc.

The treatment of this condition depends upon its cause and upon the associated conditions. If prolapse of the uterus is accompanied by hypertrophic condition of the cervix, it is obvious that relief is only to be obtained by operative interference. If there is a torn perineum, it would be useless to introduce a pessary until the perineum had been repaired.

Prolapse of the uterus is nearly always accompanied by cystocele and rectocele; indeed, in a large number of patients who seek advice it will be found that the condition is one of cystocele and rectocele, and that there is no descent of the uterus.

The treatment of prolapse by means of pessaries is purely palliative, and never results in cure; once the pessary is left out, the prolapse recurs, and is as bad as ever. Pessaries, however, do give relief, and, if properly and regularly attended to, the patient is left in comfort.

Pessaries may be inserted entirely in the vagina or partially. Of the former, the rubber watch-spring ring (Fig. 35) is the one most commonly employed, the thicker the better. A useful form is that shown in Fig. 36. The pessary is filled with a Gelatine solution, and is exceedingly soft, so that no ill-effects are felt from pressure.

The Hodge pessary (Fig. 38) is frequently used in prolapse, but the ordinary pattern is not very successful in keeping the parts in position. The modification devised by Herman (Fig. 39) is much more effective. The ordinary ring and Hodge act only by keeping the vagina extended; they do not press up the uterus at all. Their disadvantage is that, if patients strain, as in defæcation, the pessary is apt to be forced out.

With Herman's pessary, if properly fitted, the anterior end is behind the upper part of the pubic arch, so that when any expulsive effort is made

it is pressed against the bone, and consequently cannot be pushed out.

Of the other kinds of pessaries, which are partly in the vagina, the Zwancke (Fig. 41) and cup-and-stem (Fig. 42) are most commonly used. The former consists of two wings hinged together. When introducing it, the wings are folded together and passed into the vagina ; the two halves of the stem are then brought together and fastened with a screw. It will be seen that the pessary thus forms a sort of platform upon which the uterus rests. The pessary must be taken out, cleansed, and replaced in the morning. Patients can easily manage this for themselves.

The cup-and-stem, as will be seen in Fig. 42, is a cup on a stem, at the bottom of which are attached rubber straps ; these pass up in front of the thighs and behind the buttock, and are fastened to a waist-belt.

The cup-and-stem is made of either soft rubber, vulcanite, or porcelain. The rubber is too soft to keep the parts in good position ; moreover, it soon becomes foul. The porcelain is too heavy. The vulcanite is the best. The straps are usually of rubber, and they should be covered with soft linen, which can be frequently renewed. The pessary is removed each night, and adjusted on rising.

Cutter's pessary (Fig. 43) is another form, but it is more difficult for the patient to adjust, and acts very little better than the cup-and-stem.

Careful instruction should be given about douching ; the patient should be particularly warned that the pessary needs frequent removal and cleansing.

If the pessaries do not give relief or are objected to, operative treatment must be adopted.

The various operations for cure of prolapse are :

1. Perineorrhaphy with colporrhaphy.
2. Alexander-Adam's operation (shortening the round ligaments).
3. Ventro-fixation.
4. Ventro-suspension.
5. Supravaginal hysterectomy.
6. The injection of a solution of Quinine into the broad ligaments.

RETROVERSION is the condition in which the fundus uteri is posterior to the axis of the pelvic inlet.

RETROFLEXION is the condition in which the uterus is bent back on itself, so that the concavity looks towards the sacrum.

Causes of both conditions :

1. Distension of the bladder (temporary).
2. Relaxation of the uterine ligaments.
3. Increased weight of the uterus—pregnancy, subinvolution, fibroids.
4. Adhesion following pelvic peritonitis.
5. Pressure on front of uterus—*i.e.*, ovarian tumour.
6. Strains, violent falls.

It is especially to be remembered that a large

proportion of cases of retroflexion arise in the puerperium, particularly in primiparæ, and usually about the eighth to the tenth day.

Retroflexion may sometimes be congenital.

In simple uncomplicated retroversion, replace the uterus and put in a Hodge pessary.

Replacement is to be attempted first by the finger. Two fingers are passed into the vagina and pressed against the retroverted fundus, which will be found lying in the posterior vaginal fornix, in an upward and forward condition ; or one finger can be used to press the fundus up, and the other should press back the anterior portion of the cervix. After raising the fundus, the other hand should press down the abdominal wall above and behind the uterus and pull the fundus forward, the finger in front of the cervix pressing backwards.

Another method is to pass one finger into the rectum and push the fundus forward. The patient should be in the extreme Sims' position (Fig. 7), or, better still, in the knee-breast position (Fig. 8). If these attempts fail, the uterus may be replaced with the sound.

The sound having been sterilized by boiling or by passing it through the flame of a spirit-lamp, and the vagina well douched, the index-finger of the right hand should be passed into the vagina and placed on the anterior lip of the cervix. The sound (with the curve pointing backwards) should be guided along the finger in the vagina, and the tip should be

passed into the os externum for an inch or more. The handle of the sound should be carried back to the symphysis, and it will then glide into the uterine cavity. With the handle held loosely in the fingers, it is carried with a wide sweep upwards to the right side of the patient (the patient lying in the Sims' position), and then downwards. The handle of the sound is then drawn very gently and slowly back in the middle line towards the perineum. The uterus will now be in its normal position, and can be felt by the hand on the abdomen. The patient should lie almost face downward, and in this position a Hodge pessary can be inserted.

In retroflexion the uterus is to be replaced by any of the methods described above, but before attempting to do so it should be ascertained whether the uterus be movable or fixed, and whether any inflammatory mischief be present. In quite a number of cases it will be found that the uterus is enlarged, bound down by adhesions, and tender on examination. It is useless to attempt replacement under these conditions. The patient must be put to bed, and treated with hot-water irrigations, and tamponnage with Ichthyol and Glycerine plugs (10 per cent.) (see p. 128). This treatment may have to be continued for a month or more. Reposition may then be attempted, preferably under an anæsthetic, care being taken to use no undue force. If the uterus can be replaced, proceed as previously described. Next pack the vagina with a Glycerine tampon,

FIG. 7.—SIMS' POSITION.

FIG. 8.—KNEE-BREAST POSITION.

which should be left in for twenty-four hours; then put in a Hodge pessary. Sometimes a Hodge cannot be tolerated, when it is advisable to try a thick rubber ring (Fig. 37).

In a certain number of instances it is found impossible to raise the uterus, and in some, when the uterus has been raised, relief has not been obtained. In these patients, which threaten to become chronic invalids, the question of operation must be considered, either hysteropexy or Alexander-Adam's operation of shortening the round ligaments. Though the risks of such an operation, when undertaken by a competent surgeon, are now small, the question must be carefully considered, and the danger must be pointed out to the patient.

INVERSION of the uterus is when that organ is turned inside out. It may be partial—that is to say, the whole organ does not protrude through the external os—or complete, when the whole uterus may be protruded through the vulva. In the majority of cases the inversion of the uterus happens during parturition. It may occur as the result of intra-uterine fibroid; the tumour distends the cavity of the uterus, and the latter pushes on the fibroid through the external os, the uterus following.

Care must be taken not to mistake an inverted uterus for uterine polypus.

If the case is recent, it may be possible to reduce the inversion by taxis. The bladder and bowels having been emptied, the patient is anæsthetized

and placed in the lithotomy position ; the external genitals are carefully cleansed, then the vagina and uterus. The left hand is next placed over the abdomen just above the pubes, while the right grasps the uterus as a whole, the fingers near the cervix, and gently pushes it up. If the reduction can be accomplished, douche the uterus out with a hot antiseptic—Cyllin (℥i. to O.ii.), Izal (℥i. to O.ii.), Biniodide of Mercury (1 in 8,000)—at 120° F., and then pack the cavity with Cyanide gauze, continuing the packing in the vagina ; give a hypodermic of Ergotin, and put the patient to bed. The plug may be removed in twenty-four to forty-eight hours. A hot antiseptic intra-uterine douche should be given daily, and Ergot may be given by the mouth or hypodermically. The patient is to be kept in bed for from eight to ten days.

If the inversion has existed for some time, the patient is put to bed for a few days, the parts are carefully cleansed, the bowels are opened daily.

If the fundus does not protrude through the vulva, it is a good plan to pass a Barnes's bag into the vagina. This sometimes reduces the inversion, but, should it not do so, it dilates the vagina, and so gives room for subsequent manipulation.

The bowels and bladder having been emptied, the patient is anæsthetized and placed in the lithotomy position, and the genital tract made as aseptic as possible. The vagina is then lubricated thoroughly with sterilized Vaseline, and taxis applied as pre-

viously described. Should this fail, it may be assisted by a finger in the rectum and another in the bladder. If the uterus still remains inverted, the patient is put back to bed, and a large Barnes's bag is inserted into the vagina.

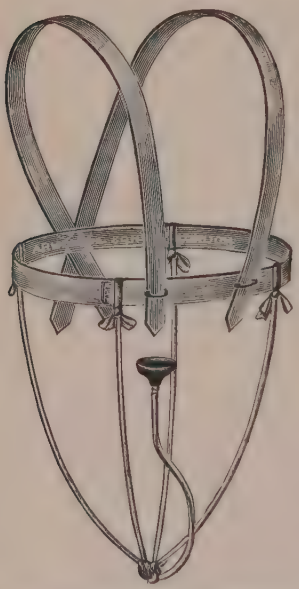

Fig. 9.—Aveling's Uterine Repositor.

Should this not succeed, it has been suggested that continuous pressure be applied by means of a cup-and-stem attached to a wire spring pressed against the chest of the operator; but a better plan is to use the repositor suggested by Aveling (Fig. 9).

The repositor consists of a cup, which should be slightly smaller in diameter than the fundus, on a curved stem, to the lower end of which elastic bands are fixed. These are attached to a waistbelt, which in turn is fixed to braces passing over the shoulders. It is applied in the following manner: The belt having been applied and fastened to the braces, take the repositor and pass it into the vagina, so that the fundus uteri fits into the cup; this is held firmly in position by an assistant while the elastic bands are fastened to the waistbelt,

two in front and two at the back, and pulled as tightly and evenly as it is possible to do. It is as well to pack cotton-wool where the bands pass, to prevent pressure on the skin.

The repositor may be left in for forty-eight hours, by which time the reposition is usually effected.

The patient should be carefully watched all the time. If pain is severe, morphia should be given. Great care must be taken in altering the tension of the straps ; if they are not evenly adjusted, the cup of the repositor may tend to slip off the fundus. The braces are readjusted as reduction proceeds, and as soon as the fundus is at the level of the external os it is advisable to replace the repositor by one with a smaller cup, as difficulty is often experienced in removing a large cup from the uterine cavity. The best way of removing the cup is to so raise it that the edge can be slipped through the os. After the repositor has been removed, douche out the uterus with a hot antiseptic at a temperature of 120° F., and give a hypodermic of Ergotin.

Should even this method fail, it may be necessary to amputate the uterus. If there is any sloughing, gangrene, or malignant disease, removal is certainly called for.

If the inversion is associated with polypus, this must be removed first.

UTERINE NEW GROWTHS

FIBROMYOMATA. — The general consensus of opinion with regard to fibroids is that if their presence is giving rise to symptoms sufficiently grave to cause the patient to seek advice, the only proper treatment is surgical.

Sometimes the patient will consult a medical practitioner, complaining of the presence of a 'lump,' but beyond this has no other discomfort, no menorrhagia, and no symptoms of pressure. It is the duty of the practitioner to explain the condition of affairs, pointing out the nature of the growth, the consequences of leaving it alone, and the risks attendant upon the operation for its removal. If it is then decided to defer surgical interference, the patient should be watched ; and if there is marked and rapid increase in size, hæmorrhage, or signs of pressure on surrounding structures, the fibroid should be removed.

It must be borne in mind that fibroid tumours increase in size just before menstruation, and it is advisable to examine a patient at this time, and again after menstruation has ceased.

If slight menorrhagia is the only symptom, rest in bed during the menstrual period, with the administration of some hæmostatic (see p. 77), will be sufficient to control the loss. No patient should be allowed to run the risk of becoming anæmic by repeated losses ; if the menstrual flow is so con-

tinuous, though not amounting to actual menorrhagia, as to produce anæmia, then it is better to advise the removal of the fibroid.

Electrical treatment has not met with much favour in this country, and rightly so ; for if the condition is not amenable to treatment by drugs, then removal is certainly called for.

If operative procedure has been decided upon, the patient must be brought into the most favourable condition. Rest is essential ; in severe cases confinement to bed may be necessary. If anæmia is present, this must be suitably treated ; the bowels must be well regulated, and a generous diet should be given. Alcohol should be avoided.

As in most of these cases the coagulable point of the blood is below normal, Calcium, either the Chloride or Lactate, should be given in 30-grain doses three or four times daily.

℞ Calcii Chlor. .. .. gr. xxx.
Ext. Glycyrrhizæ Liq. .. .. .. ♏xx.
Aq. Flor. Aurant. .. .. .. ad ℥ss.

M. Sig. : A tablespoonful in water three times daily after food.

Or :

℞ Calcii Lactatis .. .. gr. xxx.
Tinct. Capsici .. .. ♏½.
Aq. Chloroformi .. .. ad ℥ss.

M. Sig. : A tablespoonful in water three times daily.

These not only serve to check the bleeding, but by the time the patient is ready for the operation the blood is in a much better condition.

If the patient is seized by a sudden and severe hæmorrhage,[1] the vagina should be douched out, and packed as full as possible with gauze or wool tampons, either plain or steeped in a solution of Adrenalin; if this does not suffice, the cervix must be dilated and the uterus packed with gauze.

It is obvious that if a patient requires such energetic treatment, she should have the fibroid removed as soon as possible.

CANCER OF THE UTERUS.—Wherever it is possible, immediate removal is called for. Every case is suitable for operation if the uterus can be moved. If by pushing the cervix the uterus can be moved upwards, or by pulling the cervix the uterus can be made to descend, the patient should be sent to a gynæcologist who has had a wide experience in such cases as soon as ever the diagnosis is made.

Even if the uterus appears to be fixed, it is as well to obtain a second opinion, because what might at first appear to be a fixed organ may be only due to the mass in the vagina, which, when scraped away, allows the uterus to become quite movable. In any case it is always advisable to give the patient the benefit of a skilled opinion as early as possible.

Unfortunately, the majority of cases which come under observation are too far advanced for complete removal. In these much can be done to render the patient's life bearable. The growth should be scraped away with a blunt flushing curette; when

[1] See p. 81 for treatment of hæmorrhage.

the friable tissue has been removed, the walls of the cavity should be burnt with a Paquelin's cautery ; the cavity may then be dried and dusted with neutral Cotarnine Phthalate. This will check the bleeding and relieve the pain. Plug tightly with Cyanide gauze, which may be left in for from twenty-four to forty-eight hours; after this douche twice daily with any of the following : Permanganate of Potash (℥i. to O.i.) ; Biniodide of Mercury (1 in 6,000) ; Hydrogen Peroxide (1 per cent.) ; Cyllin (℥i. to O.i.) ; Lysol (℥ii. to O.i.). When there is much fœtor, the douche of Hydrogen Peroxide is the best. The parts must be kept scrupulously clean ; the skin round the vulva and perineum should be well smeared with Vaseline or Lanoline, and a plentiful supply of clean pads is necessary to absorb the discharge.

For the relief of pain begin with the Coal-tar derivatives, such as Antipyrin, Antifebrin, and Phenacetin. Aspirin has a marked effect in relieving pain ; it should be given in 10-grain doses three times daily. A newer preparation—Novaspirin—may also be given in the same dose ; it is said to have none of the disadvantages of Aspirin. It is better to postpone the administration of Opium as long as possible, beginning first with Heroin ($\frac{1}{12}$ to $\frac{1}{6}$ gr.) or Codeina ($\frac{1}{4}$ gr.), next with Morphia, and finally with Opium. It has been suggested that when the condition has been looked upon as hopeless, there is no reason to withhold Opium ; but it should

be remembered that unless this drug is given judiciously it will fail to relieve towards the end, just at a time when pain is most severe.

Morphia should be given hypodermically ; Opium may be given by the mouth, alone or in conjunction with Coca.

℞ Tinct. Opii .. .. ♏xv.
Ext. Cocæ Liq. .. .. ʒss.
Aq. .. .. ad ʒii.
M. Sig. : When the pain is severe.

Thyroid Extract has been given in doses varying from 3 to 6 grains per diem ; its value is doubtful.

Acetone has been tried both as a means of getting rid of the odour and checking the hæmorrhage and foul discharges. It is applied as follows : The patient is anæsthetized and put in the high lithotomy position ; the carcinomatous area is thoroughly curetted, douched, and dried. A tubular speculum is passed, and 1 ounce of Acetone is poured in ; this is allowed to remain for fifteen minutes. It is then allowed to run out by lowering the patient and depressing the speculum. The cavity is next packed with narrow strips of sterile gauze soaked in Acetone ; the vagina, vulva, and external genitals are next swabbed with sterilized water, and dried. This may be repeated two or three times a week. No anæsthetic is required after the first application. Care should be taken that the Acetone does not run over the vulva and perineum.

Pain is not always relieved, but the cessation of

discharge and accompanying odour is quite a sufficient argument in favour of the treatment, and pain may be relieved by any of the drugs previously mentioned.

X rays have up to the present not given the results which were anticipated. Instances have been reported where pain has been relieved and the hæmorrhage lessened.

Radium has so far been of no value in cancer of the uterus, but now that there is a prospect of a larger supply being available, more extended trials may prove its efficacy.

Inoculations with Sera, which were extensively tried at the Cancer Hospital, were found to be absolutely without value.

Chorion-epithelioma, or **Deciduoma Malignum,** is a variety of malignant disease which is always associated with abortion, delivery at full term, or, more frequently, after the expulsion of hydatid mole (hydatidiform degeneration of the chorion). Prophylactic treatment is of the greatest importance, and consists in the thorough removal of all products of conception, either post-abortum, post-partum, or after the expulsion of moles.

If deciduoma malignum is diagnosed, the only hope of cure is immediate hysterectomy.

CHAPTER IV

AFFECTIONS OF THE FALLOPIAN TUBES AND OVARIES

SALPINGITIS means inflammation of the Fallopian tubes, which may be acute or chronic. It is caused by—

1. Septic infection, generally following abortion or labour ; gangrene of a uterine polypus.
2. Gonorrhœa.
3. Extension of inflammation from surrounding parts.
4. Excessive coitus.
5. Chills.
6. Over-exertion at or near the menstrual epoch.

Treatment.—In the acute stage rest in bed is imperative. Hot douching with Boracic Acid (ʒi. to O.i.), if the pain is not too severe. The bowels must be kept open, and preferably by salines (Mist. Alb.). Milk diet. Alcohol is best avoided. If the pain is severe, Morphia may be given hypodermically.

In the chronic condition, if the patient is in easy circumstances, hot douching with Iodine or Cyllin

for a prolonged period may be given. Ichthyol tampons (10 per cent.) should be passed into the vagina, and packed well up into the fornix on the affected side. A blister should be applied over the iliac region corresponding to the inflamed tube. Iodide of Potassium should be given internally.

℞	Potassii Iodidi	gr.v.
	Magnes. Sulphat.	ʒss.
	Potass. Bicarb.	gr.xv.
	Spt. Ammon. Aromat.	♏xx.
	Aq. Flor. Aurant.	ad ʒi.

M. Sig.: To be taken with an equal part of water twice daily.

The bowels must be kept thoroughly open, preferably by salines such as Hunyadi Janos, Arabella, Apenta, etc. A course of waters at Franzensbad (May to September), Marienbad (May to September), Kreuznach (May to October), will be found beneficial.

In those who are not so happily situated, and in whom the disease threatens a life of chronic invalidism, surgical intervention is necessary.

HYDROSALPINX is a distension of the tube by serous fluid, owing to the occlusion of the abdominal ostium.

PYOSALPINX.—This is a distension of the tubes by pus, owing to an occlusion of the abdominal ostium. A hydrosalpinx may become purulent.

HÆMATOSALPINX.—By this is meant a Fallopian tube distended with blood or blood-stained fluid. (This is an entirely different condition from that in which blood is found in the tube in ectopic gestation.)

If the distension is giving rise to pain to such an extent as to cause the patient to lie up, the proper treatment is removal.

TUBERCULOUS SALPINGITIS.—The affected tube should be removed only if there is no tubercle elsewhere, such as in the lungs or kidney, or, if in the case of the lungs, it is very slight.

NEW GROWTHS OF THE TUBE.—Carcinoma, sarcoma, papilloma, dermoid, adenoma, chorion-epithelioma, all demand removal immediately they are recognized.

EXTRA-UTERINE PREGNANCY, OR ECTOPIC GESTATION, may occur in the Fallopian tube in any part of its length from the uterine cornu (interstitial) to the fimbriated extremity. It may also be situated in the ovary.

Immediately this condition is diagnosed preparation should be made for operation.

If the practitioner is not prepared to operate, and has to send for surgical help, and there are signs of internal bleeding, the patient should be kept flat upon the bed, the foot of which should be raised about 18 inches. A normal saline infusion may be given, to which a little Adrenalin has been added.

℞ Sodii Chlorid. .. .. ʒi.
Adrenalin. Chlor. (1 in 1,000) .. .. ♏xx.
Aq. .. .. ad O.i.

This is best given intravenously or under the breasts; the latter is preferable.

A hypodermic injection into the gluteal region

of Pituitary Extract (1 c.c.) will help to allay shock.

Preparation should also be made for the operation —the room made ready, hot water, towels, bowls, etc., all prepared—so that, when the surgeon arrives, no further delay is experienced.

PROLAPSE OF THE OVARY. — A prolapsed ovary may be present in the following positions :

1. In the pouch of Douglas.
2. Behind the lower part of the broad ligament.
3. In the utero-vesical pouch.

The left ovary is the one more commonly prolapsed, and may be felt in the left vaginal fornix.

Prolapse of the ovary is frequently accompanied and caused by retroflexion of the uterus. Reposition of the uterus and a suitable pessary will give relief.

Where the ovary is enlarged and tender, hot vaginal douches, Glycerine tampons, or Ichthyol and Glycerine (10 per cent.) tampons, should be employed. The bowels should be well regulated by saline purgatives, such as Carlsbad salts or Friedrichshall water, or the following mixture :

℞	Magnesii Sulphatis	℥i.
	Quin. Sulph.	gr.iii.
	Acid. Sulph. Dil.	♏x.
	Tinct. Capsici	♏v.
	Aq. Menth. Pip.	ad ℥ss.

M. Sig. : A tablespoonful in water three times daily.

A course of treatment at Ems or Kreuznach is often beneficial. If no improvement results from

the above treatment, surgical interference must be considered.

OVARITIS.—Inflammation of the ovary may be acute or chronic. The following are the causes :

1. Chill at the menstrual period.
2. Gonorrhœa.
3. Extension of inflammation from the uterus and tube—*e.g.*, after child-birth and abortion—or the passing of unclean instruments into the uterus (microbial infection).
4. Phosphorus or arsenical poisoning.
5. Secondary to parotitis.
6. Pelvic peritonitis.

In the acute stage rest in bed is necessary, and hot vaginal douches should be employed. The bowels should be kept freely open ; begin with small doses of Calomel, gr.i. every hour, until gr.iv. have been taken. If the bowels do not act after this, give a dose of Magnesium Sulphate (℥ss. in warm water).

For the relief of pain give Phenazone (gr.x.) or Phenacetin (gr.x.), or the following mixture :

℞	Sodii Bromid.	gr.xv.
	Tinct. Hyoscyami	♏xxx.
	Elixir. Aurant.	℥ss.
	Aq. Dest.	ad ℥ss.

M. Sig. : A tablespoonful in water twice daily.

This will certainly relieve the pain, and it is never necessary to give Morphia. Hot fomentations or a mustard-leaf may be applied over the ovarian region of the affected side.

In the chronic condition the hot vaginal douche with any of the following should be given, as directed in Chapter X.

Tinct. Iod.	ʒi.-O.i.
Kreuznach Water	ʒi.-O.i.
Woodhall Spa Water	ʒi.-O.i.

A vaginal tampon of Ichthyol and Glycerine (10 per cent.), or Glycerine alone, may be inserted, or the vaginal vault may be painted with Iodized Phenol, followed by a Glycerine tampon. Provided there is no affection of the kidney, blisters (Cantharides) may be applied to the abdomen over the ovarian region, or the same area may be painted with Tinct. Iodi every alternate night until the skin begins to peel.

The diet should be light and nutritious ; alcohol in any form should be prohibited. Tea and coffee may be taken.

To those who can afford it, a course of waters at Ems, Franzensbad, Kreuznach, or Woodhall Spa, is to be recommended.

General massage is of great value, and should be systematically carried out ; passive exercises should also be given. Local massage is not practised in this country to any extent, and should only be undertaken by a skilled woman. This method of treatment possesses no advantage over others previously described, so that its employment is not recommended.

As a last resource the ovaries may have to be

removed, but it should be borne in mind that, if properly carried out and thoroughly persevered with, the condition is amenable to medical treatment. Thousands of ovaries have been sacrificed which, if properly treated, need never have been removed.

New growths of the ovary, hernia of the ovary, ovarian pregnancy, all call for surgical intervention.

CHAPTER V

AFFECTIONS OF THE URETHRA AND BLADDER

URETHRA

STRICTURE of the urethra is a comparatively rare condition in the female. It may occur from cicatrization after labour or operative interference. It may be caused by new growths either within the urethra or external to it. The treatment consists in gradual dilatation ; if a tumour is present, it should be removed.

URETHRITIS, or inflammation of the urethra, is, in the great majority of instances, due to gonorrhœa ; in simple cases injuries and masturbation are given as causes.

The parts should be gently douched several times a day with warm antiseptics such as Boracic, and a 10 per cent. solution of Protargol applied to the urethra. This may be repeated at intervals of two or three days.

In the acute gonorrhœal condition rest in bed is necessary ; hot compresses of Lead and Opium should be applied to the vulva ; the urethra should be swabbed out with a 10 per cent. solution of Pro-

targol, or 5 per cent. Nitrate of Silver. Some urinary antiseptic such as the following should be given by the mouth :

℞ Urotropin. .. .. gr.x.
Syrup. Aurant. .. .. ʒss.
Aq. Dest. .. .. ad ʒss.

M. Sig. : To be taken with an equal part of water three or four times daily.

DILATATION of the urethra may occur from faulty coitus, especially when there is any malformation of the vagina ; or it may be caused by the presence of a tumour, or as the result of operative procedure.

The treatment is surgical : a portion of the wall of the urethra is dissected out, and the cut portions stitched together.

URETHRAL CARUNCLE consists of dilated capillaries (angioma) exceedingly rich in sensory nerves. In appearance it is somewhat like a small red raspberry, and is situated at the mouth of the urinary meatus. Owing to the rich supply of sensory nerves, it is exquisitely painful to the touch. It is a frequent cause of dyspareunia.

Urethral caruncles are said to be caused by irritating discharges, especially gonorrhœa.

The only efficient treatment is thorough removal, either by the thermo-cautery or the knife ; if with the latter, they should be carefully dissected out and the edges of the wound sutured. They sometimes bleed freely ; a pad soaked in a solution of Cocaine and Adrenalin will both stop the pain and check the bleeding.

BLADDER

CYSTITIS (inflammation of the bladder) may be acute or chronic.

The causes are gonorrhœa, injury from coitus, excessive coitus, the passage of dirty instruments, pressure (as in prolonged parturition, or of a tumour or badly-fitting pessary). Foreign bodies in the bladder, retention of residual urine, as in cystocele, exposure to cold, pelvic inflammations, drugs, such as Cantharides, Turpentine, and Iodides, also lead to this condition.

Treatment.—The exciting cause must, as far as possible, be removed. The urine should be properly examined. In acute cases the patient should be kept in bed ; free purgation with such salines as Friedrichshall, Hunyadi, etc., should be ordered. Milk diet and bland diluent drinks should be given, such as barley-water. The following sedative mixture will be found useful :

℞ Potass. Bicarb. .. .. gr.xv.
Tinct. Hyoscyami .. .. .. ℥ss.
Infus. Buchu .. .. ad ℥ss.

M. Sig. : A tablespoonful in water three times daily.

Or the following :

℞ Ammon. Benzoat. .. .. .. gr.x.
Tinct. Hyoscyami .. .. .. ♏xv.
Spt. Chloroformi .. .. .. ♏x.
Infus. Buchu .. .. ad ℥ss.

M. Sig. : A tablespoonful in water three times daily.

If there is much pain, a suppository should be given at night.

℞ Morphini .. .. gr.¼.
Bellad. .. .. gr.i.

M. Ft. suppositoria. Sig.: To be used as directed.

Hot baths give considerable relief.

Hot fomentations over the lower part of the abdomen are soothing, and should be applied every four hours. Great comfort may be obtained from hot vaginal douches (115° F.); these may be given three or four times daily. After the pain has subsided the following mixture may be given:

℞ Urotropinæ .. .. gr.v.
Magnes. Boro. Citratis Co. .. .. gr.xxx.
Aq. Dest. .. .. ad ℥ss.

M. Sig.: A tablespoonful in water every four hours.

Or:

℞ Urotropinæ .. .. gr.v.
Ext. Tritrici Liq. .. .. .. ℥i.
Infus. Uvæ Ursi .. .. ad ℥ss.

M. Sig.: A tablespoonful in water every four hours.

Should the condition persist, injection of the bladder (see p. 62) should be tried.

In the chronic condition the bowels should be kept freely open by the use of salines—Friedrichshall, Carlsbad, Hunyadi Janos, etc. The diet should be light. Red meat should be entirely forbidden, also hot and spiced dishes, such as curries, condiments, etc. Alcohol should be prohibited. Abun-

dant diluent drinks—barley-water, Vichy or Contrexéville water—may be taken.

The following prescriptions will be found useful :

℞ Acid. Boracis .. .. gr.xv.
Aq. Dest. .. .. ad ℥i.

M. Sig. : In an equal part of water three or four times daily.

Or :

℞ Urotropinæ .. .. gr.v.
Sodii Bicarb. .. .. gr.x.
Pot. Citratis .. .. gr.xv.
Tinct. Bellad. .. .. ♏v.
Tinct. Buchu .. .. ad ℥ss.

M. Sig. : A tablespoonful in water three times daily.

Or :

℞ Salol. .. .. gr.v.
Pulv. Acaciæ .. .. gr.xx.
Elixir. Aurant. .. .. ℥ss.
Aq. Caryoph. .. .. ad ℥i.

M. Sig. : Two tablespoonfuls three times daily (should not be given if any inflammatory extension to kidneys).

Or :

℞ Acid. Nitrici Dil. .. .. .. ♏x.
Tinct. Hyoscyami .. .. .. ♏xx.
Infus. Uvæ Ursi .. .. ad ℥i.

M. Sig. : Two tablespoonfuls in water three times daily.

If the condition is still obstinate, it is advisable to wash out the bladder, using a very weak solution of corrosive sublimate (1 in 10,000), Nitrate of Silver (1 in 15,000), Boracic (1 in 60), gradually increasing the strength of the medicament. It is inadvisable to commence with a stronger solution, because the

mucosa is so very sensitive that strong solutions will cause acute discomfort, if not actual pain. If this is brought about, then it is difficult to get the patient to submit to a repetition of the washing out, and as this should be done daily, or in some cases twice daily, it is of the utmost importance not to begin the treatment by causing pain or discomfort. The temperature of the fluid should be 100° F.

Fig. 10.—Double-channelled Catheter, with Tubing and Clip.

The following methods are employed in washing out the bladder :

The labia are separated ; the urinary meatus is thoroughly cleansed. A clean (boiled) catheter is passed gently into the bladder, and the urine is drawn off. This catheter should be double-channelled, with one of the openings funnel-shaped (Fig. 10), into which the pointed end of a Higginson (or other) syringe will fit. The other end is attached to a piece of tubing, which can be carried to a pail under the bed. On this tube a clip is placed.

After the urine is drawn off, the catheter is left in

the bladder, and the Higginson syringe, full of solution, is then attached to the catheter, and the lotion slowly injected into the bladder.

The injection is to be continued until the patient feels that no more can be borne. The fluid is allowed to remain in the bladder for a minute or two, and is then allowed to flow away by releasing the clip on the rubber tubing attached to the second channel of the catheter. The injections are to be repeated until the solution which has been injected into the bladder returns quite clear and free from turbidity.

Another and preferable way of irrigating the bladder is to use an

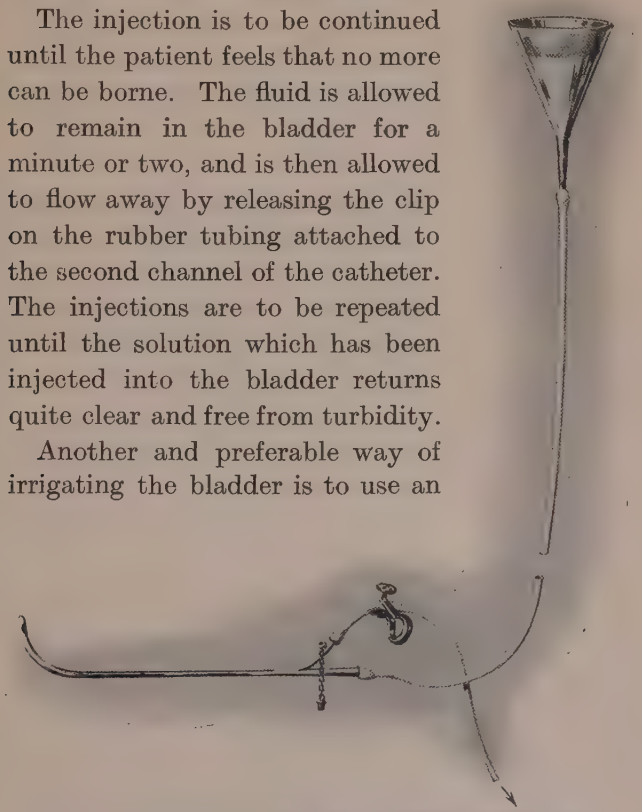

FIG. 11.—DOUBLE-CHANNELLED CATHETER, WITH TUBING, CLIP, AND FUNNEL.

ordinary glass funnel which can be connected to the catheter with a few feet of rubber tubing (Fig. 11).

The advantage of this method is that the funnel and tubing may be boiled, and the fluid injected into the bladder can be accurately measured.

The urine having been drawn off in the manner already described, the catheter is withdrawn and attached to the tubing ; the funnel is then filled with the solution, some of which is allowed to escape from the catheter; the tubing is clipped and the catheter introduced into the bladder ; then the funnel is raised, and the fluid allowed to pass gently into the bladder. The funnel should not be allowed to become empty, otherwise air might pass into the bladder, more of the lotion being poured in from a measured jug. When the patient complains of a feeling of over-distension, the funnel is lowered to the body-level, and the fluid is allowed to remain for a few minutes in the bladder. It may then be allowed to escape by releasing the clip on the second channel, or by inserting the funnel into the pail below the bed.

The bladder is filled and emptied in the same manner time and time again, until the fluid which escapes is perfectly clear.

A careful note should be made of the quantity injected, as the amount should be increased daily, until at length the patient can tolerate a very large quantity of fluid, even up to 20 ounces.

It will be found in cases of chronic cystitis that the bladder walls are thickened and contracted, and its capacity much diminished ; its rugæ are covered

with thick, tenacious, muco-purulent matter; the mucosa is in an extreme state of sensitiveness.

All these conditions are improved by irrigation; the muco-purulent discharges are washed away, leaving the inflamed surface of the bladder free to the action of the antiseptic lotion, the warmth of which has an added effect in reducing the inflammation. The bladder, by being gradually distended, regains both its tone and capacity.

Fig. 12.—Self-retaining Catheter.

Another method sometimes used, and suitable when constant drainage is required, is to place a double-channelled catheter into the bladder, with the inlet tube low down and the outlet high up, so that the bladder must be fairly full before the fluid can escape. The patient is placed over a bed-bath, the catheter introduced and connected with a douche-can filled with warm solution, preferably Boracic (1 in 60). This is allowed to run slowly and continuously for hours.

Cases will be found which resist irrigation treatment. The only course remaining is to give the bladder complete rest, and this may be obtained by means of a permanent self-retaining catheter (Fig. 12). Two should be in use. One, after being cleansed and boiled, is kept in boracic solution ready to be inserted into the bladder in place of the

one already there, this being similarly treated after its removal. The urine is allowed to pass into a suitable receptacle. An excellent bed urinal has been designed by Sister Stewart, of the Royal Infirmary, Edinburgh (Fig. 13).

Continuous drainage may also be obtained by making an artificial vesico-vaginal fistula, or by dilatation of the urethra. As these are surgical methods, the reader is referred to textbooks of gynæcological surgery.

Quite a number of cases of cystitis are due to in-

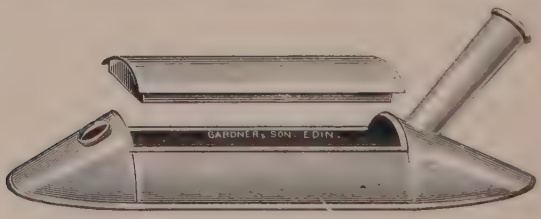

FIG. 13.—BED URINAL.

fection by the *Bacillus coli communis*, so that a careful microscopical and bacteriological examination should be made, with a view to identifying the particular micro-organism, and a suitable autogenous vaccine should be prepared.

Brilliant results have been obtained with vaccine therapy in some cases of cystitis which have resisted all other treatment.

DISPLACEMENTS OF THE BLADDER.—The commonest form of displacement of the bladder is downwards, and is associated with prolapse of the

uterus and downward displacement of the vagina (cystocele—see p. 16).

If associated with prolapse of the uterus, this organ is replaced, and a heavy, suitable pessary inserted ; if the anterior vaginal wall, with the attached bladder, has prolapsed, this is pushed up and a ring pessary inserted. Should the bladder still descend, it may be advisable to remove a wedge-shaped piece from the anterior vaginal wall and bring the edges together—anterior colporrhaphy. The bladder may be displaced upward through being attached to a fibroid or ovarian tumour.

STONE IN THE BLADDER.—Small calculi may be removed by dilating the urethra and extracting with forceps. Large stones may be crushed and washed out, or the bladder may be opened by an incision through the anterior vaginal wall, the stone extracted, the bladder being explored, washed out, and closed ; or the stone may be removed by suprapubic cystotomy.

FOREIGN BODIES are to be removed in the same manner as calculi.

FUNCTIONAL DISORDERS OF THE BLADDER.—Incontinence and retention of urine are met with in the various diseases of the nervous system, such as general paralysis of the insane, locomotor ataxy, disseminated sclerosis, etc.

In hysteria both incontinence and retention are found, though retention is the more frequent.

Mental conditions, such as fear, worry, and

anxiety, produce incontinence and frequency of micturition.

Irritability of the bladder, with frequency of micturition, is often due to nervous origin or excessive acidity of the urine.

Retention of urine is frequently associated with operations on the perineum, vagina, urethra, or anus. It should always be remembered that the constant dribbling of urine is very frequently a symptom of retention of urine.

RETENTION, if due to nervous, hysterical, or reflex disturbance, should be treated first by hot applications. A sponge full of warm water allowed to trickle over the vulva will frequently be effectual, or the patient may be put in a warm bath, and encouraged to pass the urine while in the bath ; or a hot bath may be given, followed by a cold one. If these means fail, the catheter should be passed.

INCONTINENCE of urine, especially the nocturnal form, is more frequently met with in young subjects. The child should be made to pass water immediately before going to bed, and should be awakened about the time that the attacks of incontinence have been noticed to occur. On no account should punishment be resorted to, but rather the child should be told that the trouble will get better. It is desirable not to give any fluid near the child's bedtime.

Belladonna is the most useful drug for this condition, and should be given in gradually increasing

doses, beginning with 5 minims of the tincture, and stopping when dryness of the throat and dilatation of the pupil are experienced. Tonics should also be administered, especially Strychnine. This may be given in the form of—

℞ Syrup. Ferri Phosphatis c. Quin. et Strychninæ.
Sig. : Thirty minims in water twice daily.

Recently Leonard Williams has had great success with Thyroid Extract. He recommends that the treatment should commence with small doses—1½ grains of the Thyroid Extract three times a day, increased to 2½ grains night and morning. He lays stress on the importance of dosage, and points out that over-dosing is certain to be followed by failure. He says : ' It is essential to success that the initial dose should be very small ; that this dose should be increased very cautiously, if at all ; and that the minimum dose which experience proves to be productive of good results should be steadily persevered with.'

Should these means fail, the urethra may be touched with Nitrate of Silver, or, in older subjects, the bladder may be injected and distended with warm Boracic solution, or a weak solution of Silver Nitrate (5 grains to the ounce).

IRRITABLE BLADDER is often due to the presence of parasites in the rectum, particularly threadworms ; these should be removed by enemata of Quassia or Common Salt.

If the urine is excessively acid, the irritability may be relieved by the following :

℞ Lithii Citratis .. .. gr.x.
Pulv. Magnes. Boro. Citratis Co. .. ℈ss.
Aq. Dest. .. .. ℥i.

M. Sig. : To be taken with an equal part of water three times daily.

Or :

℞ Uricedin. .. .. ℈i.
Aq. Dest. .. .. ad ℥i.

M. Sig. : To be taken in a tumblerful of warm water first thing in the morning.

CHAPTER VI

THE DISORDERS OF MENSTRUATION

AMENORRHŒA means a diminution or cessation of the menstrual flow, and may be broadly classified as primary, secondary, and physiological.

The causes of primary amenorrhœa are :

1. Constitutional conditions, such as phthisis, anæmia, chlorosis, cretinism.
2. Atresic conditions.
3. Maldevelopment of uterus or ovaries.
4. Absence of uterus or ovaries.

The causes of secondary amenorrhœa are :

1. Constitutional conditions—phthisis, Bright's disease, malaria, anæmia.
2. Cold, chills from getting feet wet during menstruation.
3. Shock and nervous depression.
4. Change of climate and habit.
5. Various forms of pelvic disease (*e.g.*, parametritis).
6. Obesity.
7. Too frequent pregnancies and prolonged lactation.
8. Post-operative (removal of ovaries or of uterus).

Physiological amenorrhœa :

1. Pregnancy.
2. Lactation.
3. Menopause.

1. **Primary Amenorrhœa.**—It is advisable, when the patient has reached the age at which she should have menstruated and has not done so, and has had the molimen, that an examination should be made, preferably under an anæsthetic. If it be found that there is atresia, operative interference is called for : if, on the other hand, the amenorrhœa is due to the absence or imperfect development of the ovaries or uterus, then no treatment is necessary. If the amenorrhœa is due to anæmia or chlorosis, these should be treated by hæmatinics, nourishing food (non-fattening), plenty of fresh air, and gentle exercise. In some cases of marked chlorosis it is better to put the patient to bed in a bright room, with an abundance of fresh air and sunlight ; the diet should be nourishing, but not of a fattening nature.

The percentage of hæmoglobin should be ascertained at frequent intervals. When this shows an increase, the patient may have massage and passive exercises ; later she may get up for a few hours daily and drive. As the hæmoglobin index rises the patient may take gentle walking exercises ; fatigue must be avoided. Baths may be taken, but should not be too hot ; the clothing should be warm, and woollen stockings and sound boots should be worn. The bowels, which are usually confined, should be kept open.

The following prescription acts both as an aperient and a tonic :

℞ Mag. Sulphatis .. .. ℥i.
Quin. Sulphatis .. .. gr.ii.
Ferri Sulphatis .. .. gr.i.
Acid. Sulph. Dil... .. .. .. ♏x.
Aq. Menth. Pip. .. .. ad ℥ss.

M. Sig. : A tablespoonful in water three times daily.

As a hæmatinic, Iron and Arsenic, as combined in the following prescription :

℞ Ferri Sulph. Ex. .. .. gr.iv.
Ext. Nucis Vom. .. .. gr.$\frac{1}{4}$.
Acid. Arseniosi .. .. gr.$\frac{1}{60}$
Ext. Hyoscy. .. .. q.s.

M. Ft. pil. Sig. : One three times daily after food.

Or :

℞ Ferri Carb. .. .. gr.ii.
Sodii Arsen. .. .. gr.$\frac{1}{32}$.

M. Ft. Bi-palatinoid. Sig. : One three times daily after food.

Or :

℞ Liq. Arsenicalis .. .. ♏ii.ss.
Liq. Ferri Dialysati .. .. .. ♏x.
Aq. .. .. ad ℥i.

M. Sig. : A teaspoonful in water twice daily after meals.

It is well to remember that a girl may be pregnant even though she has never menstruated.

2. **Secondary Amenorrhœa.**—Before commencing the treatment of secondary amenorrhœa it is extremely important that an accurate diagnosis should be made. Pregnancy *must* be excluded, no matter how unlikely it may be.

When the amenorrhœa is due to a chill, hot douching and hot baths should be ordered just before the period is due. The following capsules may be taken a few days previously :

℞ Ext. Ergotæ .. .. gr.i.
Apiol. .. .. ♏iii.
M. Ft. Capsulæ. Sig. : One three times daily.

The primary cause in each particular instance should be treated. Anæmia and chlorosis are very frequent antecedents of amenorrhœa, and should be treated as indicated in the primary condition.

It may seem a 'far cry' from the mouth to the uterus, but there is no doubt that carious teeth, both by the gastric catarrh and auto-intoxication they set up, are directly responsible for amenorrhœa in a certain number of instances. The mouth should be examined as a routine practice. If the teeth be carious, they should be extracted or stopped ; any missing should be replaced. It is no good attempting any treatment for the amenorrhœa until the mouth has been put in a healthy condition.

Amenorrhœa may result from fright — *e.g.*, an unmarried woman may imagine herself to be pregnant. No drugs should be prescribed for this condition.

Amenorrhœa is sometimes associated with deficiency or inactivity of the thyroid gland. In such cases small doses of the extract should be given.

℞ Ext. Thyroidei .. .. gr.½.
Ft. Tabloidi. Sig. : One to be taken three times a day.

MENORRHAGIA denotes an increased amount of blood from the uterus at the menstrual period. The term is relative : what is normal for one may be abnormal for another. The term may also apply to duration.

METRORRHAGIA means a discharge of blood from the uterus at times other than the menstrual flow. The two conditions may co-exist.

It must be remembered that menorrhagia and metrorrhagia are symptoms, and not diseases, and therefore treatment must be directed to the cause. It may be well to point out that whereas menorrhagia may be of functional origin, metrorrhagia is practically always due to some organic condition.

It is absolutely imperative that in all cases of uterine hæmorrhage a vaginal examination should be made. The only possible exception is in the case of young unmarried women, but even in these cases, if the hæmorrhage persists after treatment by drugs, an examination under an anæsthetic becomes a necessity.

In giving the following causes of menorrhagia and metrorrhagia, the hæmorrhages of the pregnant state, except ectopic gestation, are omitted :

MENORRHAGIA

1. Constitutional, such as hæmophilia, scorbutus, purpura, Bright's disease, cirrhosis of the liver, heart disease, fevers, alcoholism.

2. Local, such as pelvic peritonitis, retrodisplace-

ments, subinvolution, endometritis, inversion, mucous and fibroid polypi, adenoma, fibromyoma, carcinoma, sarcoma, chorion-epithelioma, salpingitis, ovaritis, some forms of ovarian tumours.

3. Idiopathic (no cause discoverable), especially at puberty and the menopause.

METRORRHAGIA

1. Constitutional. None.

2. Local, mucous or fibroid polypus, new growths of uterus, inversion of uterus, ectopic gestation.

Treatment.—It is obvious that before treatment can be attempted an accurate diagnosis is essential; therefore the cause must be determined. There can be no question as to the treatment required in the cases due to new growths—that is, removal as soon as diagnosed.

Hygiene is important, especially in young girls who have a tendency to irregularity. Excessive exercise, such as bicycling, hockey, and tennis, should be avoided just before the period is due, and rest in bed for two or three days during the period. Badly ventilated rooms should be avoided.

The bowels should be thoroughly well regulated, but not purged, except before the period is due. As a rule no drugs are necessary, except in slight cases; but should the flow still be excessive, Ergotin may be given either in the liquid extract or in palatinoids, combined with Hydrastin and Strychnine.

℞ Ext. Ergot. Liq. .. .. ℥xxx.
Liq. Strychnin. .. .. ℥iii.
Aq. .. .. ad ℥ss.

M. Sig.: A tablespoonful in water two or three times daily.

℞ Ergotin. .. .. gr.¾.
Hydrastinæ Hydrochlor. .. .. gr.⅓.
Cannabin. Tannatis .. .. .. gr.½.
Cotarnin. Hydrochlor. .. .. .. gr.¼.

M. Ft. Palatinoid. Sig.: One three times daily.

Viburnum prunifolium is indicated when there is pain associated with menorrhagia. An elegant preparation is Parke, Davis and Co.'s Liq. Sedans, which contains *Viburnum prunifolium*, Hydrastis, Piscidia, and various aromatics.

℞ Liq. Sedans. .. .. ℥i.
Ext. Ergot. Liq... .. .. .. ℥ss.
Aq. .. .. ad ℥ss.

M. Sig.: A tablespoonful in water three or four times daily.

Suprarenal Extract may be given in the form of Adrenalin Chloride (15 to 20 minims of the 1 in 1,000 solution) three times daily.

Calcium Chloride and Calcium Lactate are both particularly useful in those cases where the coagulable point of the blood is below normal—the type of case often seen in conjunction with chilblains (for prescription, see p. 45).

Calcium should be taken a week before the period is due, and continued throughout the period, or half-doses may be continued from one period to the next.

Potassium Bromide, in conjunction with Ergot and

Digitalis, is very useful in some forms of climacteric hæmorrhage.

℞	Potassii Bromid.	gr.x.
	Ext. Ergot. Liq.	℥xxx.
	Tinct. Digitalis	℥v.
	Aq. Aurant. Flor.	ad ℥ss.

M. Sig.: A tablespoonful in an equal part of water to be taken three times daily immediately after food.

Gelatine has in some cases proved of considerable value. It can be given either subcutaneously or by the rectum; the latter is preferable, as the risk of infection by the subcutaneous method is too serious.

The Gelatine is prepared in the following manner: 50 grammes (about $1\frac{3}{4}$ ounces) of the best French Gelatine are dissolved in $1\frac{1}{4}$ litres (2 pints $3\frac{1}{4}$ ounces) of boiling water. This is *boiled very gently for one hour*, when the volume is reduced by evaporation to 1 litre. The solution is then cooled down to the body temperature, and $\frac{1}{4}$ litre (nearly 9 ounces) is slowly passed into the rectum by means of an ordinary irrigator. It is preferable to have the solution made up by a reliable chemist, and if the bottles (each bottle containing sufficient for one dose) are sealed with paraffin, there is no likelihood of the solution becoming infected. If this is done, the following course should be adopted: Place the bottle containing the sterilized gelatine in water, and bring the heat up to 100° F. Place the funnel and tubing of the irrigator in very hot water for a few minutes.

Pass the tube into the rectum, and slowly pour the gelatine into the funnel. The injection is given three times daily, and is to be retained.

Neutral Cotarnine Phthalate is a most useful drug in treating uterine hæmorrhages. Commercially known as Styptol, it is given in the form of tablets in doses of ¾ grain three or four times daily. The dose may safely be increased to 2 grains three or four times a day. In climacteric hæmorrhage it is especially indicated. It may also be used as a dusting-powder in cases of inoperable carcinoma when there are large raw or sloughing surfaces ; it both checks the bleeding and relieves pain.

Hydrastin, either alone or combined with Ergot, or Hamamelis, is indicated in cases of uterine congestion.

℞	Tinct. Hydrastis	♏xv.
	Ext. Ergot. Liq.	♏xv.
	Tinct. Hamamelidis	♏xv.
	Aq. Dest.	ad ℥ss.

M. Sig. : A tablespoonful in water three times daily.

Or :

℞	Ext. Hydrastis Ext. Hamamelidis	.. .. .. āā gr.i.
	Ext. Ergot.	gr.ii.
	Cannabin. Tannatis	gr.i.

M. Ft. pil. Sig. : One three times daily.

Another drug of inestimable value, especially in cases of uterine bleeding associated with shock and collapse, is Pituitary Extract. The infundibular

portion of the gland appears to contain the active principle. It is absorbed very slowly, if at all, from the stomach, so that it is best administered by intramuscular injection.

Burroughs Wellcome and Company supply the Infundibular Extract in glass phials (vaporoles) containing 1 c.c., equal to 3 grains of the fresh substance of the gland.

The injections are best given deeply into the gluteal region.

Lodal, a synthetic preparation analogous to Cotarnine, is an excellent drug in many cases of uterine hæmorrhage. Lodal differs from Cotarnine in that it causes a small but distinct and rather persistent rise of blood-pressure, accompanied by a slowing of the heart-beat. It is more quickly excreted. Lodal is prepared by Burroughs Wellcome and Company in 1-grain tabloids ; the dose is 1 grain four or five times daily.

If, after careful examination, no cause can be discovered, and the bleeding does not respond to medical treatment, the uterus should be dilated, explored, and curetted, and the scrapings handed to a competent pathologist for examination.

The uterine cavity should be injected with Boric Acid (℥i. to O.i.), Cyllin (℥i. to O.ii.), then dried, and a styptic, such as Liq. Ferri Perchlor., applied. The cavity should then be packed with Cyanide ribbon gauze (1 inch in width), and the vagina tamponed.

In a great many instances the curettage is a therapeutic means, and the menorrhagia is cured.

If further treatment is needed, this must depend upon the report of the pathologist.

To sum up, all cases of uterine hæmorrhage due to constitutional causes, some cases of pelvic peritonitis, subinvolution, and endometritis, should be

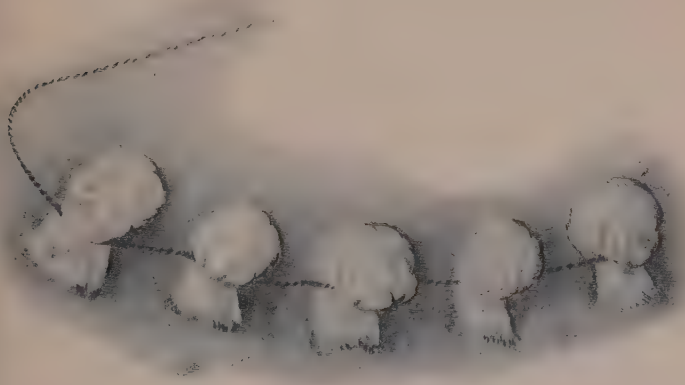

Fig. 14.—Kite-Tail Plug.

treated medically. The treatment of the remainder is surgical.

Not uncommonly a practitioner is sent for, and finds a patient flooding; the most efficient means of checking this is first to wash out the clot, and then pack the vagina as full as it will hold. Tampons of cotton-wool made in the form of a kite-tail (Fig. 14), or Cyanide or Iodoform gauze, may be used. The patient should be placed in the left lateral posi-

tion (Sims') or in the knee-chest position, a Sims' speculum (Fig. 15) introduced, the posterior vaginal wall pulled back, and the plugs passed into the vagina all round the cervix, pressing them into

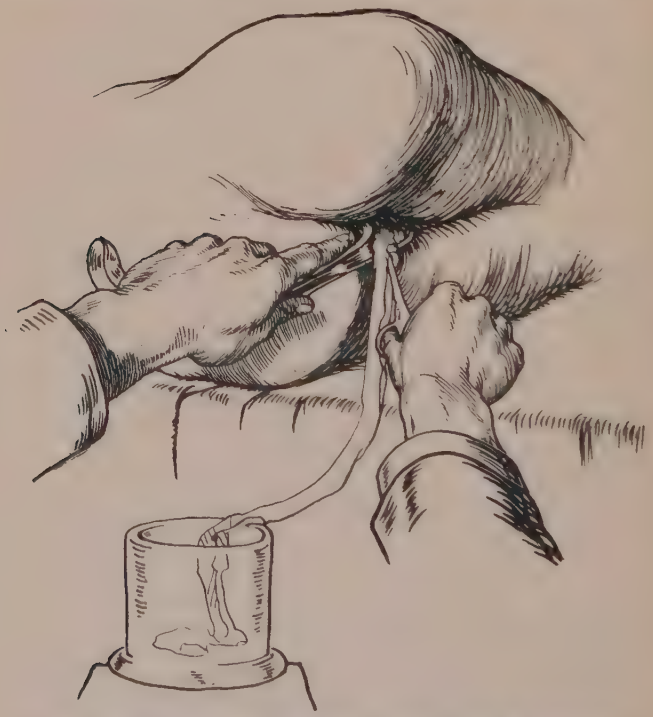

FIG. 15.—METHOD OF PACKING VAGINA WITH SPECULUM AND FORCEPS.

position, and filling the vagina until it is thoroughly sealed. It is by no means essential to have a speculum : two fingers of the left hand, well vase-

lined, should be passed into the vagina and separated, and the plugs passed between them (Fig. 16),

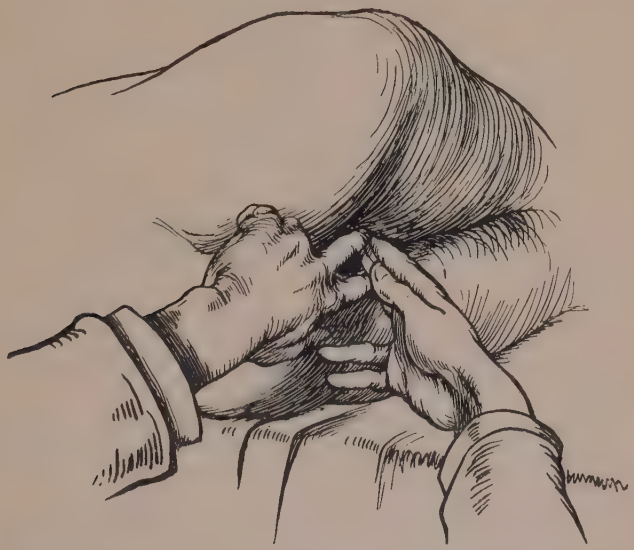

FIG. 16.—METHOD OF PACKING VAGINA WITH FINGERS ALONE.

either with the fingers of the right hand or a pair of forceps ; or the gauze may be introduced by means

FIG. 17.—GAUZE PLUGGER.

of a gauze-plugger (Fig. 17). The plug may remain in position for twenty-four hours, when it should be

removed, the vagina douched, and, if necessary, replugged. This both checks the bleeding and gives the practitioner time to make a proper diagnosis.

Hot douching may be profitably employed in those cases associated with pelvic cellulitis. It is to be carried out in the manner described in Chapter X.

In douching a patient for bleeding, the temperature should never be lower than 115° F., and gradually raised until it reaches 120° F. If the temperature of the water is lower, it is not only inefficient, but does more harm than good, for, instead of checking bleeding, it actually encourages it.

Each douche should last for at least twenty minutes, and should be given morning and night and between the periods ; if, however, the flow at the period is excessive, then the douche should be given about the second or third day of the period, but this is not often necessary.

DYSMENORRHŒA

By this term is meant pain associated with the menstrual epoch, varying in degree. It is difficult to gauge the pain ; what is severe in one woman would pass almost unnoticed in another.

There are few women who do not have some discomfort or pain at the period—it may be a day or so before, the first twenty-four hours, all through the period, or even after the flow—but it is not suffi-

ciently bad to cause them to seek advice for relief. The best evidence of the amount of pain which is suffered is afforded by the fact that it is so severe that the patient is unable to perform her ordinary duties or to fulfil social engagements, such as going to dances, theatres, etc.—pleasures which would not otherwise be readily forgone.

There are, of course, many patients who suffer severely, but who have sufficient strength of mind and body to enable them to get about, though they would much rather stay at home taking care of themselves. These are the cases who will come to you for treatment.

It must be remembered that dysmenorrhœa is a symptom, and not a disease (unless we accept the definition of Matthews Duncan : ' Pain of uterine contraction which expels the menstrual decidua '), and is associated with various pelvic lesions, such as uterine displacements, pelvic inflammation, and maldevelopment.

Other causes are malnutrition, neuralgia, rheumatism, gout, and neurosis. These may be classed as constitutional causes. In a work of this kind, even if space permitted, it is not necessary to attempt to classify dysmenorrhœa ; it will be sufficient for the reader to confine his attention to the causes in so far as they are given.

Most practitioners will have noticed that the great bulk of patients who seek advice for the relief of dysmenorrhœa are either unmarried, or, if married,

nulliparous women ; and in a fair percentage of these it will be found on examination that there is some displacement or maldevelopment, the displacement most commonly associated with dysmenorrhœa being acute anteflexion of the uterus.

It is by no means necessary, nor is it desirable, to make an examination in a young unmarried woman until at least all medical therapeutic means have been exhausted ; then, an examination being essential, it should be conducted under an anæsthetic, and if any treatment is found to be necessary, it can be carried out at the same time, thus sparing the patient the discomfort and anxiety attendant upon a second anæsthetizing.

Hygiene is important. Good, plain, nourishing food in those cases which show signs of malnutrition is clearly indicated ; the appetite, owing to recurring pain, is so impaired that the patient refrains from food, and soon gets into a 'run-down condition,' and is less able to bear the pain than if in a better physical condition. If ordinary food cannot be taken, nourishment should be given at frequent intervals ; the appetite should be coaxed, until at length ordinary food can be enjoyed.

A daily bath should be taken, followed by a brisk rubbing down with a rough towel. Plenty of fresh air between the periods, riding, walking, tennis, cycling, and golf, are all healthy forms of exercise. 'Tight lacing' must be absolutely forbidden. With regard to rest, there can be no doubt that in

certain cases absolute rest in bed for the first few days of the period is necessary. If this is made a rule, together with the administration of appropriate drugs for a few months, the patient will be able gradually to renew the ordinary mode of life.

Early hours should be insisted on, especially in young growing girls ; indeed, they should be encouraged to sleep for an hour or two during the day. Severe study, long school-hours, and piano-practising should certainly be forbidden during the period.

In not a few instances it will be found that constipation is an outstanding factor in young girls who complain of dysmenorrhœa, and in these cases careful regulation of the bowels will often be sufficient treatment.

A good plan is to administer salines two or three days before the period is due ; this not only relaxes the bowel, but, in addition, relieves pelvic congestion. In those cases in which vomiting is associated with dysmenorrhœa a small dose of Calomel (gr.i.), given on alternate nights three or four days before the period is due, followed next morning by a saline in hot water, prevents vomiting and relieves the pain. In the intervals between the periods the bowels should be most carefully regulated (see Chapter VII.). If this is done, the general condition of the patient is so much improved that the periods also become less painful.

Hot foot-baths, to which mustard has been added, hot sitz baths, or hot-water bags on the abdomen, give relief.

Treatment by Drugs. — Never, under any circumstances, should alcohol be given in any form. Alcoholic stimulants unquestionably give relief, but they are in many cases the foundation of the alcoholic habit. It will often be found that the patient has been given hot gin and water, or hot whisky and water ; this should immediately be prohibited, and the danger the patient is incurring should be pointed out. The same may be said of Opium and its preparations. It may be that the practitioner will be driven to it in order to relieve the agony of pain, but if it is given, the doctor should administer it himself hypodermically. A prescription should never be given to the patient. Of all drugs in the Pharmacopœia, Opium is the one which will certainly relieve the pain ; but if the pain is so severe that it resists treatment by means of other analgesics or minor operation, it is better to remove the uterus than to allow the patient to pay the fearful price for the relief of dysmenorrhœa by becoming a morphinomaniac.

Happily, such cases are extremely rare ; most will respond to either drugs or slight operative treatment. Amongst the most serviceable drugs are those of the coal-tar derivatives. They may be prescribed in tablet, cachet, or liquid form. Some of the following prescriptions have been found, after

considerable experience, to be efficacious in relieving pain :

℞ Acetanilid. .. .. gr.iii.
Caffein. Cit. .. .. gr.ii.
Sodii Bicarb. .. .. gr.v.

M. Ft. cachet. Sig. : One to be taken when the pain is severe, and repeated in four hours.

Or Heroin may be incorporated.

℞ Acetanilid. .. .. gr.iii.
Caffein. Cit. .. .. gr.ii.
Sod. Bicarb. .. .. gr.v.
Heroin. Hydrochlor. .. .. .. gr. $\frac{1}{12}$.

M. Ft. cachet. Sig. : One to be taken when the pain is severe, and repeated in four hours.

Or :

℞ Phenazoni .. .. gr.x.
Spt. Ammon. Aromat. .. .. .. ℥i.
Syrup. Aurant. .. .. ℥ss.
Aq. Chlorof. .. .. ad ℥ss.

M. Sig. : A tablespoonful in water, to be repeated in four hours if necessary.

Or ·

℞ Exalgin. .. .. gr.i.
Syrup. Aurant. .. .. ℥ss.
Decoct. Cinchonæ .. .. .. ad ℥ss.

M. Sig. : A tablespoonful in an equal part of water to be taken three times daily.

Or :

℞ Phenacetin. .. .. gr.iv.
Caffeinæ Cit. .. .. gr.i.

M. Ft. palatinoid. Sig. : One every four hours until four have been taken.

Ammonol, a preparation containing Acetanilide and Carbonate of Ammonium in 10-grain doses, also gives relief.

Aspirin or Novaspirin often give relief, especially when there is a rheumatic or gouty diathesis.

℞ Aspirin. .. .. gr.v.

M. Ft. tabellæ vel cachet. Sig.: One every ten minutes until three have been taken. May be repeated in four hours.

In congestive cases diffusible stimulants, with or without sedatives, may be given :

℞ Spirit. Chloroform. .. .. .. ♏xv.
Spirit. Ammon. Aromat. .. .. ♏xx.
Liq. Ammon. Acetat. .. .. .. ℥i.
Tinct. Capsici .. .. ♏v.
Aq. .. .. ad ℥ss.

M. Sig.: A tablespoonful in a wineglassful of hot water every four hours.

Or :

℞ Ammon. Bromid. .. .. .. gr.x.
Spt. Ammon. Aromat. .. .. .. ♏xx.
Tinct. Lavandulæ Co. .. .. .. ℥ss.
Aq. Chlorof. .. .. ad ℥ss.

M. Sig.: A tablespoonful in a wineglass of water three times daily.

Or :

℞ Spiriti Ætheris } .. .. āā ♏xv.
Spt. Ammon. Aromat. }
Tinct. Zingiberis Fort. .. .. .. ♏v.
Tinct. Carminativæ .. .. .. ♏x.
Aq. Chloroformi .. .. ad ℥ss.

M. Sig.: A tablespoonful in an equal part of water three or four times daily.

Caulophyllin, Pulsatilla, and *Viburnum prunifolium* have all been extensively used, and may be given combined, as in the following formula :

℞ Ext. Caulophyllin. Liq.
Tinct. Pulsatillæ
Tinct. Viburnum. Prunif. } .. .. āā ɱxv.
Syrup. Zingiberis .. .. .. ʒi.
Decoct. Tritici .. .. ad ʒi.

M. Sig. : A dose to be taken every four hours.

A good preparation containing Caulophyllin and Pulsatillæ is the Liq. Caulophyllin et Pulsatillæ Co. of Oppenheimer—a tablespoonful in water every four hours.

Another one is that combined with Helonias (a drug much used in America), and put up by Parke, Davis as Elixir Helonias Compound ; it contains—

℞ Helonias. ..
Viburni Opuli
Caulophyllin. } .. .. .. āā gr.xv.
Mitchellam Repens. .. .. .. ʒi.

M. Sig. : A teaspoonful in water every four hours.

Hyoscyamus and Belladonna combined in the form of a suppository will often give relief.

℞ Ext. Hyoscyami.. .. .. .. gr.ii.
Ext. Belladonnæ .. .. .. gr.¼
Ol. Theobromæ .. .. q.s.

M. Ft. suppos. Sig. : One to be inserted into the rectum, to be repeated in six hours if not relieved.

When the flow is scanty, the injection into the rectum of a pint of hot normal saline solution, which

should be retained, will relieve the pain by increasing the flow.

Membranous Dysmenorrhœa, which means painful menstruation accompanied by the discharge of membrane, has not hitherto been mentioned. Treatment by drugs is disappointing ; Arsenic sometimes does good, and may be given a trial, but repeated curettage is the best treatment.

℞	Liq. Arsenicalis	♏iii.
	Tinct. Cimicifugæ	♏x.
	Elix. Aurant.	℥ss.
	Aq. Dest.	ad ℥ss.

M. Sig. : A tablespoonful in water three times daily after food.

When dysmenorrhœa is due to displacement, replacement of the uterus and the insertion of a suitable pessary will give relief.

If, after a thorough trial of drugs, the dysmenorrhœa is still unrelieved, the uterus should be dilated, and in some cases curetted, the only exception being in the case of a girl who is shortly to be married. It is worth while trying to tide over a few periods (with Morphia, failing everything else) until after marriage, for it is possible that pregnancy may result, and a natural cure is then established. Should this not be so, an operation may be undertaken both for dysmenorrhœa and sterility.

INTERMENSTRUAL PAIN.— By this is meant pain occurring between the periods—it may be midway between, or a fixed date before the next period, or after the preceding one. There may or may not

be pain at the actual period. It is closely associated with sterility ; in more than half the cases recorded the patients have been sterile.

The cause is obscure ; it is probably due to ovarian or tubal disease. Hydrosalpinx of an intermittent character has been observed, the swelling subsiding at the menstrual epoch, and reappearing between that and the next period.

Some cases, such as inflamed appendages, do well with a course of baths and medicinal waters. Pain may be relieved by drugs such as Phenacetin, Phenazone, etc. ; but if any pathological condition of the ovaries or tubes can be discovered, surgical interference is called for.

CHAPTER VII

CONSTIPATION

It can hardly be said that constipation is a condition peculiar to the female, but it certainly is a fact that women are much more costive than men ; indeed, a certain physician used to say, perhaps ungallantly, but with a good deal of truth, that "woman is a naturally constipated animal."

Women, from excess of modesty, will often postpone a visit to the lavatory if they think there is a chance of being seen ; the constipated habit, in consequence, soon supervenes. Many women during menstruation seem to dislike paying a visit to the water-closet, and in these it can be readily understood that costiveness is the rule rather than the exception.

In all cases of constipation it is clearly the rule to determine the cause before attempting treatment. First and foremost the physician should insist upon the necessity of a daily evacuation, and at a definite time ; the patient should choose a time which is most convenient, and this should be kept to. Many prefer the first thing in the morning, before the bath ; others immediately after breakfast ; others, again, before retiring at night. There is a good deal

to be said in favour of this last plan, especially if there is any forcing or straining accompanying the act of defæcation, because after the bowels are emptied the patient retires to rest, and the hæmorrhoidal veins are not then called upon to support the column of blood, as they would do if the patient were in the erect posture.

It must be impressed upon the patient that straining, forcing, or bearing down should not be resorted to, to produce a motion. Such a procedure will inevitably result in hæmorrhoids, prolapse of the bowel, or even fissures. If the regular visit is not at first successful, it may be assisted by a simple enema—a glycerine suppository, or a small piece of soap shaped like a suppository. The great point is to educate the bowel to demand a regular daily action at a definite time.

If the constipation is of long standing, it will be found that the rectum and colon contain large scybalous masses ; in such a condition it is necessary to empty the bowel by high enemata, either of soap and water or oil. The latter is preferable, and should be given by a skilled nurse in the following manner :

The patient, lying on the left side, has a rectal tube carefully and gently passed up the bowel as high as it will go. A funnel is attached to the tube, and raised a foot above the patient. Olive oil, slightly warmed, is poured into the funnel, and allowed to flow slowly into the bowel ; if this is done carefully, 1 or 2 quarts may be tolerated, and will prove effectual.

The patient should be instructed to retain the oil

as long as possible ; by so doing, it will help to soften the hardened fæces, and make it easier for them to be passed.

A mixed enema of castor oil and warm water may be given, but in much smaller quantity. The nurse must first introduce the water, and then about 4 ounces of castor oil, finishing the irrigation with warm water until the patient can stand no more ; the tube is then withdrawn, and the motion will follow very quickly.

Diet is a very important factor in the treatment of constipation, and this should be carefully regulated. Those foods should be given which leave a large residue, such as wholemeal or brown bread, porridge, and bran-bread ; stewed fruits, particularly figs and prunes ; ripe fruits, such as apples and oranges. The practice of eating an apple the first thing in the morning is an excellent one, and is decidedly helpful in constipation. Plenty of vegetables should be taken, especially onions and spinach.

Exercise is certainly called for, particularly in those who are accustomed to lead a sedentary life ; a brisk walk in the morning or riding for an hour will work wonders. The writer knows of a lady who was constipated for years, and who was finally cured by taking a brisk half-hour's walk in the air every morning before breakfast.

Unfortunately, it is difficult to get women to follow such an energetic example.

Massage, if properly carried out, is followed by very good results. The muscles should be well

kneaded, and the course of the colon should be followed, beginning in the right iliac fossa, and working over the colon in its continuity.

All the above means should be given a careful trial, and it will be found that a large number of cases of chronic constipation will yield to such treatment without having recourse to any of the numerous drugs in the Pharmacopœia.

The medicines that may be given for the relief and cure of constipation are innumerable, but it is only proposed to consider here those that have been found most useful.

Cascara Sagrada is without doubt the best drug with which to treat chronic constipation, but it must be given in a rational manner. Too often cascara is given as an occasional purge ; it cannot be too strongly emphasized that this is the way it should *not* be given. The proper method is to begin with a moderate dose sufficient to produce a natural easy motion, and then gradually reduce the dose each night, until finally the patient secures a regular daily action without the medicine.

A good plan is to combine other drugs with the Cascara, and the following formula will be found very useful :

℞ Ext. Cascaræ Sagradæ Liq. .. .. ℥ss.
Tinct. Nucis Vomicæ
Tinct. Belladonnæ } .. .. .. āā ♏iiss.
Glycerini .. .. ad ℥i.

M. Sig. : A teaspoonful in a little water at bedtime, the dose thereafter to be gradually reduced.

Sometimes it will be found that there is not enough cascara in the above, and, rather than give more of the mixture, it is better to prescribe a separate bottle of Cascara, which can be added to the Cascara mixture. This may sound rather complicated, but the writer has found by experience that it is better to keep the Nux Vomica and Belladonna at the above small doses, and to let the patient add the Cascara to the necessary amount. The quantity of Cascara varies tremendously in different cases, and the best plan is to tell the patient to find out the dose necessary, and, having determined this, to take the mixture in gradually reducing doses.

The patient must be made thoroughly to understand that it is absolutely necessary that a dose be taken every night, and that the course of treatment must be continued for two or three months at the very least. It is very difficult to get these instructions carried out ; the mixture is taken for a few weeks, and the patients imagine they are cured. The medicine is left off, a relapse takes place, and the Cascara is discredited.

After an experience of some years—and in those patients who have religiously adhered to the treatment the writer has not known of one failure—it is impossible to say beforehand how long the cure will take—in some a few months, in others a year or longer ; but if it is persevered with, a cure may be confidently looked for.

Senna may be combined with Cascara, and the following will be found a satisfactory mixture :

℞ Ext. Sennæ Legum. Liq. }
Ext. Cascaræ Sagradæ Liq. } .. .. āā ʒss.
Tinct. Carminativæ .. .. .. ♏v.
Elixir. Aurantii .. .. ad ʒii.

M. Sig. : A dessertspoonful in a wineglass of water at bedtime.

After Cascara, Aloes will be found very useful in chronic constipation, and should be combined with other laxatives ; there is nothing better than the well-known pill prescribed by the late Sir Andrew Clark.

℞ Aloin. ..
Ext. Nucis Vom.
Ferri Sulphatis
Myrrhæ Pulv. .. .. .. āā gr.½
Ipecac. Pulv.
Saponis ..

M. Ft. Pil. Sig. : One after dinner.

Aloes combined with Iron should be prescribed in the treatment of constipation in which amenorrhœa is a factor.

℞ Ext. Aloes. Barb. .. .. .. gr.i.
Ferri Sulphatis .. .. gr.ii.
Ol. Rutæ .. .. ♏½
Pulv. Capsici .. .. gr.¼

M. Ft. Pil. Sig. : One three times a day for a week, then one twice a day for a month, then one every night for two or three months.

In those patients who are constipated and are subject to liver attacks Podophyllin will be found serviceable ; it may be prescribed either alone or in

conjunction with Euonymin and Aloin. The following, put up in palatinoid form by Oppenheimer and Company, is very useful:

℞ Euonymin. .. .. gr.i.
Podophyllin. .. .. gr.¼
Aloin. .. .. gr.⅜
Pulv. Zingiberis .. .. gr.¼
M. Ft. palatinoid. Sig.: One at bedtime.

Phenolphthaleïn has lately been used; it seems to suit some cases, and to produce a full, easy motion. It is given in doses of ½ to 3 grains. F. A. Rogers makes a very nice chocolate tablet of 2 grains, which may be broken into four equal parts, so that from ½ to 2 grains may be taken, as found necessary.

Of the saline waters, Apenta, Æsculap, Cabana, Friedrichshall, Hunyadi Janos, Rubinat, and Pullna, are among the best; they should be given in doses varying from one to two wineglassfuls of warm water first thing in the morning.

Compound Liquorice Powder finds favour with many. It is useful in occasional constipation. One or two teaspoonfuls may be given.

Conf. Paranilla c. Menthol, which is a Petroleum product, is extremely useful. It acts mechanically —that is to say, it is a lubricant, preventing the fæces from becoming hard and solid, and thus helping them along the bowel; not a particle of the drug is absorbed.

The dose is three or four teaspoonfuls a day, either before or after meals; it must be continued for some weeks.

CHAPTER VIII

GONORRHŒA IN THE FEMALE

Gonorrhœa is a much more serious disease in the female than in the male, and requires the most careful treatment; the fact that the peritoneal cavity is practically open to infection from the genital tract is sufficient to point out how serious and grave a condition gonorrhœa may become in a woman. It will be readily conceded that the practitioner must exercise the greatest possible care and thoroughness in his treatment of the disease.

In the first place, it is important that the patient should be told of the danger of infection, both to others and to her own mucous membranes—*e.g.*, gonorrhœal conjunctivitis. Should occasion arise to handle the parts or dressings, or anything used in the local treatment, it is absolutely essential thoroughly to wash and disinfect the hands; towels which the patient uses should not be employed by anyone else; soiled dressings should be burnt, and any instrument which is used in

the treatment of the case must be thoroughly sterilized.

The chronic stage of the disease is the one in which the practitioner is most likely to see it ; he will rarely be consulted for acute gonorrhœa.

Treatment.—In the acute condition rest in bed is absolutely essential. Active treatment is best avoided ; by this is meant the passage of douche-nozzles or any instrument into the vaginal canal. The external genitals should be bathed with warm boric lotion five or six times daily ; wool and gauze pads should be worn to absorb the discharge ; these should be burned as soon as they are removed. Hot sitz baths give great relief, and should be used in addition to the bathing with boric lotion. If the discharge is very profuse, it is advisable to remove the hair on the vulva, so that the parts may be kept scrupulously clean.

The patient should have the bowel thoroughly cleared out with a saline purge (see prescription, p. 29). A milk diet is the best ; spicy food—*e.g.*, curry, etc.—and alcohol must be absolutely forbidden, and the patient should be induced to take large quantities of barley or oatmeal water. If there is much smarting on passing urine, the following prescription should be given :

℞ Pot. Acetat. .. .. ʒss.
Spt. Æther. Nitrosi .. .. .. ʒss.
Tinct. Hyoscyami .. .. .. ɱxx.
Infus. Buchu .. .. ad ʒi.

M. Sig. : To be taken every four hours.

If there is much irritation or pruritus :

℞ Liq. Plumbi Subacetat. .. .. ℥ss.
Spt. Vini Rect. .. .. .. ℥i.ss.
Glycerini .. .. ℥i.
Aq. .. .. ad℥xii.

M. Ft. Lotio. Sig. : Apply on a pad every four hours.

Coitus must, of course, be forbidden. The husband ought to be examined, and if found suffering from gonorrhœa, recent or old, should be carefully treated as well.

In subacute and chronic conditions the first consideration must be to get rid of the micro-organism, the gonococcus. This must be done with the greatest thoroughness, but with as little damage as possible to the tissues. The following plan should be adopted :

The patient, being placed upon a bed-bath, should be *gently* douched with warm Biniodide of Mercury (1 in 6,000). The vagina should be thoroughly distended with the fluid, so as to remove as much of the discharge as possible from the vaginal folds and depressions, and afterwards should be wiped with sterile swabs. A speculum (Sims') may then be passed, and the cervical canal swabbed with a 10 per cent. solution of Protargol or a 20 per cent. Argyrol. The vagina must be similarly treated, every ridge and sulcus being thoroughly swabbed with the solution. It should then be thoroughly packed with plain sterilized gauze, which is left in for twenty-four to forty-eight hours. On removing this, the vagina

should be again well douched with the Biniodide solution. The next night a packing of gauze steeped in the following solution should be inserted :

℞ Glycerini Acidi Borici .. .. .. ℥ii.
Glycerini Acidi Carbolici .. .. ℥i.
Spt. Rect... .. .. ℥ii.
Aq. Dest... .. .. ℥iii.

This should be repeated nightly until the discharge shows signs of diminishing, when a daily douche of Permanganate of Potash (℥i. to O.i.) should be given.

Some patients find the treatment of packing the vagina intensely painful. In such cases a Cocaine plug (5 per cent.) may be inserted beforehand, and after ten to fifteen minutes the treatment may be carried out as above described.

Within recent years the treatment of gonorrhœal vaginitis by injections of yeast has found favour in Germany and America. It is claimed that the gonococci and discharge are very quickly removed. (For method of application, see p. 20.)

In gonorrhœal cervicitis care must be taken against infecting the uterine cavity. The discharge from the cervical canal should first be thoroughly wiped away. The mucous membrane should then be painted with a 10 per cent. solution of Protargol or 20 per cent. solution of Argyrol. The vagina may then be lightly packed with sterile gauze, which may be removed in the evening, and a warm antiseptic douche given. The application of Protargol or Argyrol is repeated on alternate days.

In chronic gonorrhœal endometritis the uterine canal must be carefully dilated, and weak solution of Protargol (5 per cent.), Argyrol (10 per cent.), or Iodized Phenol, may be applied with the uterine mop (Fig. 1). This should then be removed, and a clean mop left in the canal to act as a drain, and the vagina lightly packed with sterile gauze. At the end of twenty-four hours the uterine mop should be removed, and a warm antiseptic vaginal douche given.

Curettage is not recommended ; thorough swabbing of the uterine cavity with one of the medicaments mentioned above, and drainage, will yield quite as good, if not better, results.

GONORRHŒAL SALPINGITIS AND OVARITIS.—The patient should be kept in bed for several weeks, and treated with hot douches and tamponnades (see p. 126). This treatment should be given a thorough trial before resorting to operation.

In the treatment of gonorrhœa of the cervix, body of the uterus, tubes, and ovaries, it is essential that the patient be confined to bed.

In all gonorrhœal infections a vaccine should be tried (see p. 151).

CHAPTER IX

STERILITY AND DYSPAREUNIA

STERILITY may be either absolute or relative.

By absolute sterility is meant where there has been no attempt at pregnancy, complete or incomplete ; for example, no child has been born, no abortion, no miscarriage has occurred.

By relative sterility is meant, a woman may conceive and bear children, but not in number according to her age and the length of time she may have been married. Again, a woman may conceive, miscarry, or abort, and never give birth to a living child.

THE CAUSES OF STERILITY.—By far the commonest cause of sterility is age. According to Matthews Duncan, the best reproductive years of a woman's life are between the ages of twenty and thirty-four.

Defective development of the uterus or ovaries and ovarian disease are frequent causes of sterility.

Sexual Incompatibility.—Examples of this are occasionally seen in the human subject, and it is well known amongst breeders of animals.

A man may marry and beget a child by one wife, but is unable to impregnate a second wife. He dies ;

the second wife marries again, and is impregnated by her second husband.

(The case of Napoleon and Josephine is often quoted as an example of sexual incompatibility, but there were several factors in this case which make it impossible to say, with any degree of certainty, that this was a true case of sexual incompatibility.)

The above causes are irremediable. Among the causes which lend themselves to treatment may be mentioned : Spasmodic and membranous dysmenorrhœa, persistent hymen, stenosis of the cervical canal, vaginal discharges, obesity, alcoholism, vaginismus, polypi, uterine displacements, pelvic cellulitis, endometritis and endocervicitis ; atresia of vulva, vagina, and cervix ; ignorance of both husband and wife.

Cases of sterility associated with **Spasmodic Dysmenorrhœa** are best treated by gradual dilatation of the cervical canal. In those in which membranous dysmenorrhœa exists the uterus should be curetted and swabbed out with Chromic Acid or Iodized Phenol.

Persistent Hymen.—This may be removed by the passage of the well-lubricated fingers, or by suitable vaginal dilators of gradually increasing size, or it may be necessary to resect the hymen ; but, as a rule, gradual dilatation will be effectual.

Stenosis of the Cervical Canal should also be treated by gradual dilatation.

Vaginal Discharges should be properly examined. A vaccine may be employed, as in gonorrhœal dis-

charge ; the vaginal canal should be thoroughly douched, as described on p. 119. Pregnancy is not likely to take place as long as acrid discharges are allowed to continue. With regard to medicaments employed in the douche, it should be remembered that any medicated douche should be followed by thorough flushing of the vagina by plain boiled water. Should this not be done, sufficient quantity of the medicated solution may be retained to kill the spermatozoa.

Obesity.—Fat women are usually sterile. The treatment is mainly dietetic. Sugars, starch, and fluids should be reduced to a minimum. Exercise in the open air should be taken vigorously.

Alcoholism.—It is not often that the practitioner is consulted for sterility by a patient who is subject to alcoholism, but there is no doubt that sterility is common among alcoholics. The only hope for curing the condition is total abstention.

Vaginismus.—See p. 21.

Polypi in any part of the canal may cause sterility. The treatment consists in removal.

Uterine Displacements.—In those in which the uterus lies posteriorly, replacement and a suitable pessary will often be effectual.

In those lying forward, the only kind which may be called displacements are those of acute anteflexion. Dilatation and light curettage is often followed by success.

Pelvic Cellulitis.—See p. 160.

Endometritis and Endocervicitis.—See pp. 24, 27.

Atresia of Vulva, Vagina, or Cervix should be treated by separation of the tissues if incomplete, by dilatation and the wearing of a vaginal rest (Fig. 3). If complete, the separation may have to be effected by dissection, and means taken to prevent the parts adhering afterwards.

Ignorance.—Not infrequently cases are seen where both husband and wife are entirely ignorant on the subject, or have the vaguest idea as to what constitutes the marital act. A little judicious advice to the husband usually puts matters right.

It should ever be remembered that the cause of the sterility may lie with the husband, and it should be made a rule never to undertake treatment in the wife until the practitioner has satisfied himself that the husband is not the defaulter. It is not sufficient that the man is capable of having sexual intercourse ; he may be potent so far as this is concerned ; but it is essential that his seminal fluid be examined. This may be found to contain no spermatozoa, or, if present, they may be dead, mutilated, or very few, which move but feebly. Dead spermatozoa, with pus-cells and blood in the seminal fluid, are nearly always indicative of gonorrhœa.

Among the causes found in the male are :

1. Impotence ; this may be found in young men as well as old.

2. Epididymitis—

(1) Gonorrhœal.

(2) Secondary to parotitis.

3. Deformities—*e.g.*, epispadias.
4. Injuries.
5. Undescended testicle (sometimes).

The treatment of sterility in the male is beyond the scope of this book.

Another cause, not previously mentioned, is a psychic one, but, as a rule, this is only temporary, and takes the form of impotence, due mostly to nervousness. Numerous instances of this condition might be quoted ; it may occur in those accustomed to intercourse as well as in those who have never previously indulged.

Too frequent intercourse is not an uncommon cause of sterility ; the remedy is obvious.

Intercourse occurring immediately before the menstrual epoch is due, especially in the newly-wed, though it cannot be said to cause sterility (often enough the woman may conceive), may give rise to the impression that sterility exists, because, owing to the engorgement of the pelvic organs at such a time, the period comes on, and the ovum, which may have been fertilized, is thrown off. It is advisable to point this out, and prohibit coitus just before the onset of the expected period.

DYSPAREUNIA

Dyspareunia—that is, pain or difficulty in coitus—is a frequent cause of sterility. This may be caused by—

Vaginismus (see p. 21).

Urethral caruncle.

Vaginitis.

Tender hymeneal tags (carunculæ myrtiformes).

Prolapsed or enlarged ovaries.

Pelvic inflammation.

Disproportion in size of male and female organs.

IMPOTENCE.—Mention has been made of the partial impotence of the husband as the cause of dyspareunia (see p. 22).

Quite apart from the question of the treatment of sterility, it is of the utmost importance to seek out the cause of dyspareunia and remedy it. Much marital unhappiness will result if dyspareunia be allowed to remain untreated. Unfortunately, rather than seek advice women go on suffering, putting up with the pain and discomfort for years, until at length, the condition becoming more aggravated by delay, they are driven to seek relief.

Although it is a recognized fact that many women become pregnant without experiencing any sexual feeling, it is equally a fact that very few women who suffer from dyspareunia, if, indeed, any, become pregnant.

In cases of dyspareunia associated with sterility, if the former be properly treated and the condition cured, pregnancy very frequently follows.

CHAPTER X

DOUCHING

CONSTANT reference has been made in these pages to vaginal douching, and as the treatment in many cases depends upon the proper appreciation of carrying out this treatment, it has been thought advisable to devote some space in describing the methods employed.

MATERIALS REQUIRED — One Douche-Can (Fig. 18).—This should be large enough to hold a gallon of water; the outlet should be at least 1 inch above the level of the bottom of the can, and should be furnished with a tap. The object of having the outlet higher than the bottom of the can is to prevent the escape of any medicaments in too concentrated a form into the vagina.

Three Feet of Good-Quality Rubber Tubing.—The nozzle should be made of toughened glass, and slightly curved, so that it can be easily cleansed, and can be *seen* to be clean; this is impossible in the ordinary vulcanite kind. The perforations in the nozzle should be round the bulb and never at the

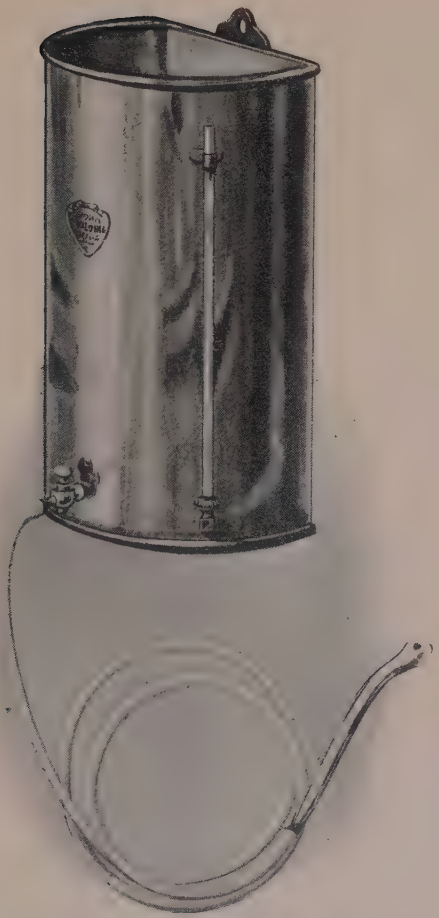

FIG. 18.—DOUCHE-CAN, GLASS NOZZLE.
(Note gauge at side of the can.)

terminal point of the bulb, the reason being that the force of the water is expended in the end of the tube before it radiates from the sides.

A useful form of douche is that known as the **Rotunda Siphon Douche** (Fig. 19); it is convenient

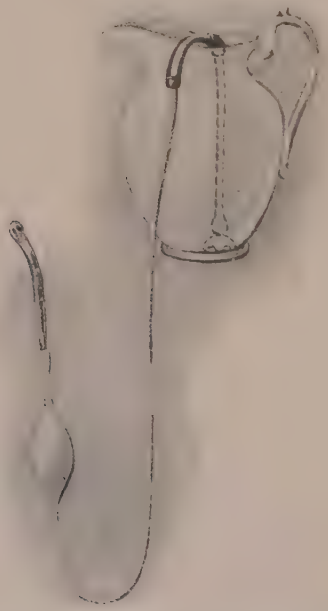

Fig. 19.—Rotunda Siphon Douche.

for travelling purposes or for the practitioner to carry in his bag.

The can or jug should be stood on a shelf, about 3 feet above the level of the patient.

A Bed-Bath, with cushion and a suitable outlet to

carry off the water. The best form is that devised by Miss Stewart, Sister-in-Charge of the Gynæcological Ward at the Royal Infirmary, Edinburgh (Fig. 20).

It will be seen that this resembles the ordinary bed-bath as far as external appearance. It is in internal construction, however, that this bath differs

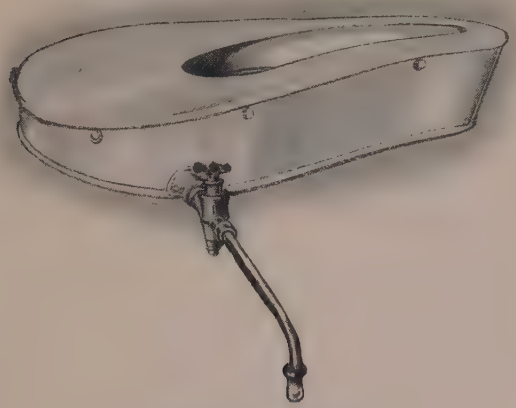

Fig. 20.—Bed-Bath.
(Cushion is not shown in sketch.)

from the ordinary type. The outlet is placed at the side. There is a false bottom, consisting of two inclined planes, which meet in a gutter running from side to side across the centre of the floor of the bath. The gutter is continued to the side of the bath, and terminates in an opening into which is screwed a right-angled tube, which carries off the water into

a pail placed beneath the bed (Fig. 21, Section of Bed-Bath). It will be seen from this that it is impossible for the bed-bath to overflow, and when prolonged douching is required it obviates the necessity for constantly lifting the patient on and

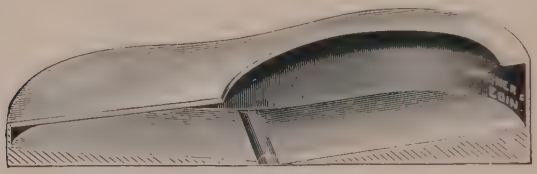

Fig. 21.—Section of Bed-Bath.

off the bath, as happens when the ordinary bed-bath is used.

In cases where it is not possible for patients to obtain a bed-bath, the following plan will be found to act very satisfactorily: Take an ordinary bath towel, roll it up (Fig. 22), place a board on the bed,

Fig. 22.—Ordinary Bath Towel rolled.

and shape the towel into the form of a horseshoe (Fig. 23); over this fix some jaconet, and bring the edges over the bed into a pail (Fig. 24). The patient may now lie with the buttocks on the edge of the covered board and the feet resting on two chairs (Fig. 25).

FIG. 23.—BATH TOWEL ON BOARD IN BED, SHAPED INTO HORSESHOE.

FIG. 24.—THE HORSESHOE-SHAPED TOWEL COVERED WITH JACONET, WHICH ENDS IN A PAIL.

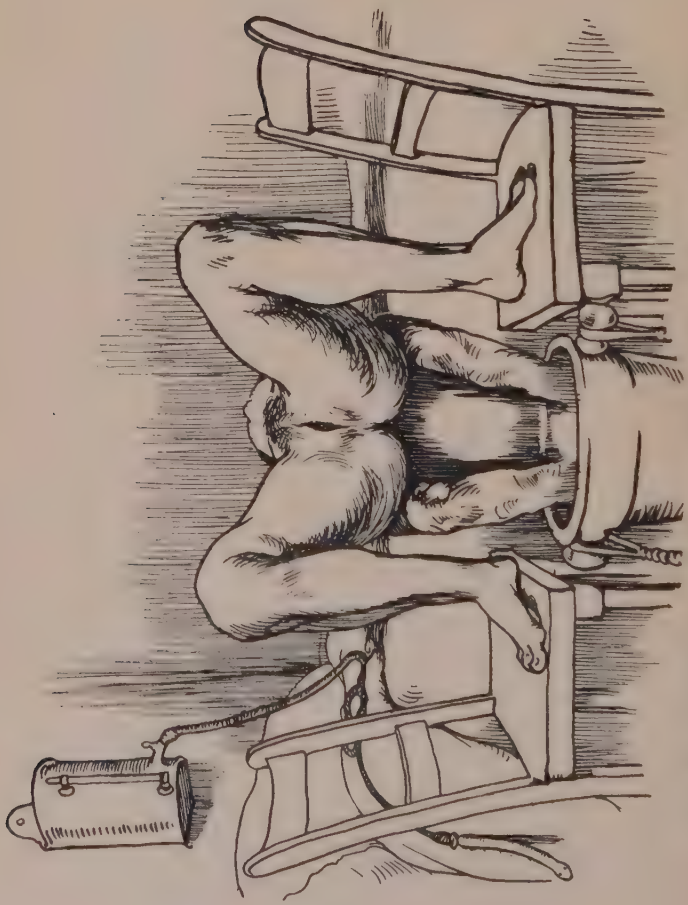

FIG. 25.—PATIENT PLACED IN POSITION ON IMPROVISED DOUCHING-PAD.

Another method is to use **Kelly's Pad** (Fig. 26) on a board in the same way.

A bath thermometer for ascertaining the temperature of the douche ; hot and cold water ; vaseline, or some heavy ointment ; medicaments for douche.

POSITION OF PATIENT.—This is of the greatest importance, whatever the reason of the douche may be—whether it is to relieve inflammatory affections or merely for cleansing purposes. The patient is placed on the bath in such a manner that the pelvis is on a higher plane than the head ; the knees drawn up and separated ; the chest, abdomen, and upper part of the thighs are covered with warm clothing ; the skin of the external genitals, over which the water flows as it escapes from the vagina, is well smeared with vaseline or ointment. The douche is allowed to run for a moment or two before introducing the nozzle, so that the cold water in the tube may not be passed into the vagina.

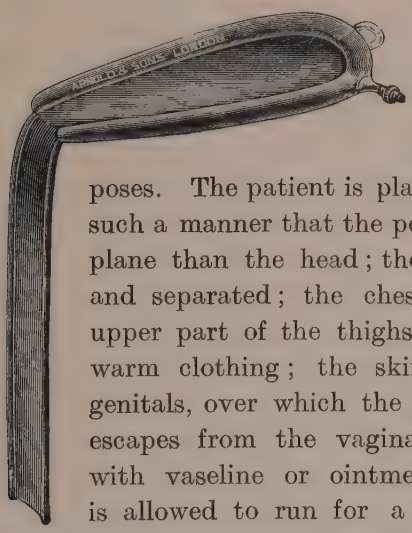

Fig. 26. Kelly's Pad.

The douche-can should not be entirely emptied ; the tap should be turned off as soon as the fluid comes to the bottom of the gauge, the nozzle withdrawn, and the patient allowed to sit up to empty the vagina. The bed-bath may then be removed.

When prolonged douching is required, as in pelvic inflammations, the temperature of the douche should commence at 110° F., and be gradually raised to 120° F. This should be given for at least twenty minutes. When the douche-can requires refilling, it is desirable to turn off the tap, thoroughly mix the douche, and take the temperature of the fluid before letting the douche flow again. The reason for this is obvious : if the water is too cold, it will chill the patient ; if too hot, it will scald. The reason for the position of the patient is well exemplified when the douche is given for an inflammatory condition of the pelvis. What is aimed at is to have a continuous application of heat to the vaginal roof and its contiguous organs, and this is obtained by the well of fluid which remains in the vault of the vagina. It will be quite clear that if the pelvis were on a lower plane, the fluid would only be sprayed against the vagina, and never remain in contact with it for a sufficient length of time to act as an antiphlogistic.

Women are constantly advised to douche, but are seldom given definite directions as to how they should carry it out. Time and time again one has advised a course of common douching, only to be met with the answer, ' I have douched till I am sick of it.' If asked how, the invariable reply will be, ' Oh, in the usual way,' which, on further inquiry, turns out to be squatting over a bidet and using a Higginson's syringe. This amounts to a simple

washing of the vagina, and not a very good one at that.

If, when wearing a pessary, the patient requires a douche for cleansing purposes, or has any discharge, she should lie in exactly the same position as indicated above, and instructions should be given to hold the labia against the nozzle, so as to prevent the water escaping. In this way the vagina will be ballooned out, which will thus allow the medicated douche thoroughly to bathe the vaginal wall. When the vagina feels quite full the hands should be removed, and the fluid let out with a rush; if this be done two or three times, it will cleanse the vagina more thoroughly than a week of douching in the way that it is ordinarily done.

Uterine douching is used as a means of checking hæmorrhages and for irrigating the uterine mucosa with a warm solution of antiseptic in cases of sepsis.

For the arrest of hæmorrhage the temperature of the fluid must be 120° F.; a lower temperature will encourage bleeding, and not check it.

The vagina is first thoroughly douched with a hot antiseptic, as already described; the glass vaginal nozzle is then removed and replaced by a double-channelled catheter, such as Bozemann's (Fig. 27) or Budin's (Fig. 28), so that the fluid may escape freely from the uterus. The temperature of the douche having been ascertained, the fluid is allowed to run for a few minutes, so that the air in the tube and catheter may be expelled, and the cold solution in

FIG. 27.—BOZEMANN'S INTRA-UTERINE DOUCHE.

FIG. 28.—BUDIN'S UTERINE TUBE.

the tube may be replaced by fluid at the temperature required. The douche-can should be held at a height just sufficient for the solution to flow freely.

A bivalve speculum having been passed into the vagina, and the blades separated so as to expose the cervix, the catheter may be passed directly into the uterine cavity without touching the vaginal walls. Care must be taken not to empty the can completely, for fear of air escaping into the uterine cavity.

For purposes of irrigation in septic conditions the temperature of the lotion need not exceed 110° F. The following antiseptics may be used :

Tinct. Iod.	ʒii.-O.i.
Hydrogen Peroxide	ʒss.-O.ii.
Cyllin	ʒi.-O.i.
Izal	ʒi.-O.i.
Lysoform	ʒi.-O.i.

Mercurials are not recommended. Owing to the absorption which may take place, should they be used, a solution of hot sterilized water should follow immediately.

After the injection has been given a light drain of gauze or mop may be inserted (see Fig. 1, p. 19).

MEDICAMENTS USED IN VAGINAL DOUCHES —Antiseptics :

Tincture of Iodine	ʒi.-O.i.
Cyllin	ʒi.-O.ii.
Sulpho-carbolate of Zinc	ʒi.-O.i.
Lysol	ʒi.-O.i.
Izal	ʒi.-O.i.

The preparations of mercury are among the most efficient from the point of view of antiseptics, but they are also apt to irritate. It is rarely advisable to use either the Perchloride or Biniodide in stronger solution than indicated below ; in many instances it will be necessary to use them weaker.

Perchloride of Mercury	1 in 4,000.
Biniodide of Mercury	1 in 4,000.

The soloids of Burroughs Wellcome and Company are extremely convenient for preparing the solutions ; one soloid (gr. 8·75), dissolved in a pint of water, makes a solution of 1 in 1,000.

Sedatives :

Liq. Plumbi Subacetatis	ʒi.-O.ii.
Chloral Hydratis	ʒss.-O.i.
Sodii Bicarb.	ʒii.-O.i.
Tinct. Opii	ʒi.-O.i.

Astringent :

Aluminis	ʒi.-O.i.
Tannin	ʒss.-O.i.
Zinc Sulphate	ʒi.-O.i.

Cleansing :

Sanitas	ʒi.-O.i.
Sodii Chlorid.	ʒii.-O.i.

An exceedingly useful formula is the following :

℞	Sodii Chlorid.	gr.xxv.
	Sodii Sulph. / Sodii Carbonatis }	āā gr.1¼
	Sodii Phosphatis	gr.i.
	Potass. Chloridi	gr.1½

This may be prescribed in the soloid of Burroughs Wellcome and Company, two to each pint of hot water.

Antiphlogistic :

Tinct. of Iodine	℥i.-O.i.
Kreuznach Salts	℥i.-O.i.
Woodhall Spa Water	℥i.-O.i.

CHAPTER XI

VAGINAL PACKS OR TAMPONNAGE

Vaginal packs or tampons are used—

1. In the treatment of inflammation.
2. To arrest hæmorrhage.
3. For keeping the vagina aseptic preparatory to operation.
4. For drainage.
5. After applications to the cervix or uterine cavity.

METHOD OF PREPARING TAMPONS.—The tampon may be made in the form of a rope, pledgets of cotton-wool tied in the form of a kite's tail, strips of medicated gauze, or a single ball of wool. The rope is made in the following manner: A sheet of absorbent cotton-wool, ⅛ inch thick, 14 inches in length, and 4 inches wide, is placed on a piece of sterilized jaconet; the medicament to be used (an ounce or two) is poured over the flat strip of wool (Fig. 29); the wool is then folded across in its long axis, and then twisted into a rope, so that the drug is made to soak through every part of the tampon (Fig. 30).

The kite-tail plug is made by taking small pledgets of absorbent cotton-wool, and tying them at intervals

FIG. 29.—METHOD OF SATURATING PAD OF WOOL WITH ICHTHYOL AND GLYCERINE.

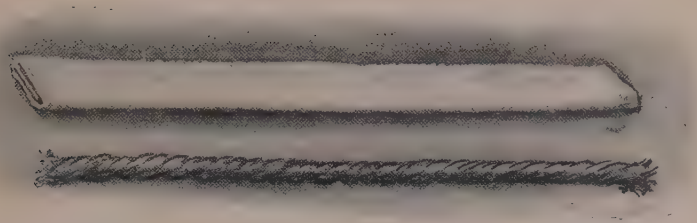

FIG. 30.—(*a*) WOOL FOLDED OVER; (*b*) WOOL TWISTED INTO SHAPE OF A ROPE.

on a piece of tape (Fig. 31). These are then soaked in an antiseptic or any other medicament, or may be used dry.

The gauze used may be of Iodoform, Sal Alembroth, or Double Cyanide, and should be of 4-inch width.

The single ball of absorbent cotton or lamb's wool

Fig. 31.—Kite-Tail Plug.

should have a tape attached, of sufficient length to reach the vaginal orifice.

The medicaments chiefly employed for soaking the plugs are Glycerine, Ichthyol and Glycerine (10 per cent.), and Boroglyceride.

℞ Ichthyol. Ammon. Sulph. .. .. ʒi.
Glycerini .. .. ʒix.

M. Sig.: One or two ounces to be applied on cotton-wool as directed.

When Glycerine or Boroglyceride is used the pledgets are placed in a clean bowl, and the medicament poured on and allowed to soak into them.

If the single plug of wool is used, it is first of all shaped like a cup, with a tape tied round it, and 2 drachms of medicament are poured into the hollow of the cup ; the tape is then drawn taut and tied (Fig. 32).

1. In using tampons for **Inflammatory Conditions,** they should be inserted after the douche has been given at night.

Fig. 32.—Cup-shaped Plug.

The patient should be placed in the Sims' position, or on the back with the buttock raised, or in the knee-breast position. A speculum (Sims' or Fergusson's or a bivalve) should be warmed and greased, and inserted into the vagina. One end of the tampon, held by the vaginal forceps, must then be passed through the speculum, and packed carefully round the cervix, layer by layer (Fig. 33) ; the speculum is gradually withdrawn, and the pack pushed up with the forceps.

The chief point to be remembered is thoroughly to pack the posterior fornix.

After the tampon has been inserted a pad should be placed over the vulva to absorb the discharge, which would otherwise escape on to the patient's

linen. The tampon introduced at night must be removed in the morning, and a douche given.

2. In packing the vagina for **Hæmorrhage,** the kite-tail tampon is used. The vagina should be

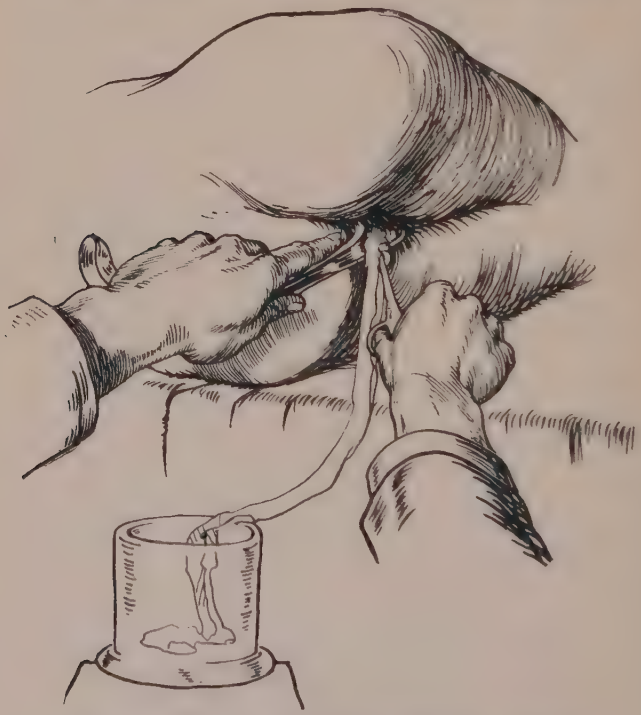

Fig. 33.—Plugging with Speculum and Forceps.

douched and all clots removed, a suitable speculum passed in the manner already described, and the pledgets, previously steeped in an antiseptic solution, passed in with the vaginal forceps and packed

as tightly as possible. If more than one 'kite-tail' is necessary, the ends of the tapes should be tied so that the tampons may be removed entirely. This is better than packing with separate pledgets of wool, some of which may be left behind when the tampon is removed. Strips of medicated gauze may also be used in the same way, the ends of the strips being tied.

The packing is removed at the end of twenty-four hours.

In some cases it may be necessary to pack the uterus. Having exposed the cervix, the anterior lip may be steadied by means of a volsellum (or the uterus may be steadied by counter-pressure on the abdomen). Ribbon gauze, 1 inch in width, with selvedged edge, is passed, by means of slender forceps, uterine sound, or gauze packer (Fig. 17, p. 83) up to the fundus, and packed as tightly as possible. The end of the gauze protruding through the cervix is tied to gauze of greater width, and the vagina is also thoroughly packed. The tampon should be removed in twenty-four hours. It is to be understood that packing the vagina in cases of hæmorrhage is in many cases only a temporary expedient, and that the cause of the bleeding should be sought for and treated.

It is not, of course, absolutely necessary to use a speculum and forceps; the practitioner should be able to pack the vagina without either. Two fingers of the left hand, well vaselined, should be passed up

into the vagina, and well separated. The plug can then be passed well into the vagina with the fingers of the right hand, without causing the patient more than slight discomfort (Fig. 34).

The important point to be remembered in packing the vagina for hæmorrhage is that the plug must be

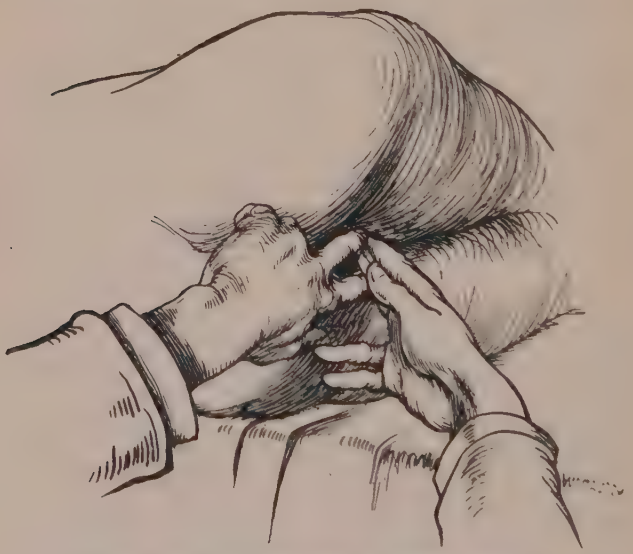

Fig. 34.—Plugging with Fingers only.

packed right up to the top of the vagina, and packed *very tightly*.

3. **For keeping the Vagina Aseptic preparatory to Operation.**—The vagina should be thoroughly douched and lightly swabbed, a sterilized speculum passed, and the vagina lightly packed with aseptic

or medicated gauze, and the vulva covered with a sterile pad.

The gauze should be removed when the patient is on the operating-table.

4. **For Drainage.**—In some forms of endometritis a tampon of gauze may be passed into the uterus, or one of the uterine mops (Fig. 1, p. 19) may be used, and the vagina lightly packed with medicated gauze (Sal Alembroth, Double Cyanide, or Iodoform) to absorb the discharge. The vaginal tampons should be changed in twelve hours, the uterine drain in twenty-four to forty-eight hours.

In some forms of purulent vaginitis the vagina may be lightly packed with medicated gauze after douching and swabbing ; this acts as a drain, and keeps the vaginal walls apart.

5. **After Application of Medicaments to the Cervix or Uterine Cavity.**—The single pledget, with tape attached steeped in Glycerine, is passed into the vagina, and applied so as to enclose the cervix.

CHAPTER XII

PESSARIES

A PESSARY is an instrument devised for the purpose of supporting the pelvic organs and maintaining them in their normal position.

The following are the types of pessary in general use :

Ring pessary.

Hodge pessary and modifications.

Zwancke, or expanding pessary.

Cup-and-stem pessary.

THE RING PESSARY (Fig. 35) is made of good quality rubber, with a central wire spring (watch-spring), so that the pessary may be compressed in order to insert it without causing the patient pain, and it may regain its shape when the pressure is removed.

A very useful ring pessary on the market is one in which the ring is hollow and filled with a solution of gelatine (Fig. 36). This is much softer, but it has the disadvantage that it does not retain its shape so long as the ordinary ring.

A modification of the gelatine ring is seen in

FIG. 35.—WATCH-SPRING RING PESSARY.

FIG. 36.—GELATINE RING PESSARY.

Fig. 37, which, in spite of its size, is extremely light. This is useful in cases of prolapsed ovary and some forms of retroflexion ; it is, however, only suitable for nulliparous women.

The ring is used in cases of cystocele, rectocele, and prolapse of the uterus. A suitable size must be employed ; if too small, the ring will come out when the patient strains, as in defæcation or coughing ; while, if it is too large, it presses on the rectum and bladder, and may cause ulceration of the vagina.

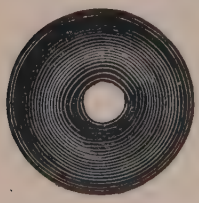

Fig. 37. — Extra Thick Gelatine Ring Pessary.

Method of Introduction.—The patient should be placed on the left side (Sims' position), with the knees well drawn up. The bladder and rectum should be empty. The displacement having been rectified, the pessary, which should be lying in a bowl of warm antiseptic solution, is compressed by the thumb and forefinger of the right hand. The free end of the pessary, smeared with vaseline, is passed between the labia (which have been separated with the fingers of the left hand) and well up into the vagina before being released. The first two fingers of the right hand follow the pessary, and press the ring well behind the cervix. The upper vaginal walls should then be quite taut.

THE HODGE PESSARY (Fig. 38) consists of two parallel side-bars joined at the lower end by a

straight cross-bar, and at the upper end by a curved bar ; in profile it has a sigmoid curve, so that when it is in position it adapts itself to the shape of the vagina. It is made of vulcanite, aluminium, celluloid, or block tin. The pessary can be obtained in various sizes and degrees of curve. The celluloid or block tin may be easily altered to suit the requirements of the individual case.

The Hodge is used for backward displacements

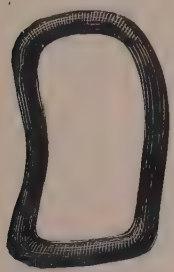

Fig. 38.
Hodge Pessary.

Fig. 39.
Herman Pessary.

(retroversion and retroflexion) and in some forms of prolapse.

Method of Introduction.—The patient lies in the left lateral position, with the knees well drawn up. The lower end (straight bar) is grasped between the thumb and forefinger of the right hand ; the upper end is well vaselined. The labia are separated with two fingers of the left hand. The instrument is then introduced with its plane surface in a line with the vulval opening, and is directed backwards towards the hollow of the sacrum ; it is next given a half-turn

to the front, and the index-finger of the right hand, placed on the upper transverse bar, gently presses it up behind the cervix into the posterior fornix. The lower bar should be just under the symphysis pubis. When in position, the large concavity should look upwards and forwards.

A useful modification of the Hodge pessary is that devised by Herman (Fig. 39). It differs from the Hodge pessary in that it has only one curve. Looked at from the side, it is concave upwards ; it is inserted in the same manner as the Hodge. Herman recommends it principally for prolapse.

THE ALBERT SMITH PESSARY (Fig. 40) is another modification of the Hodge. It consists of two lateral bars joined by rounded ends. The bars are not parallel ; they are wide apart at the upper end, and converge below. Seen from the wide end, it is sigmoid in shape. It is used for the same class of cases as the Hodge, and is introduced in the same way. It has no advantage over the Hodge, and if the introitus vaginæ is large it is likely to fall out ; it is also more likely to interfere with coitus than the Hodge.

THE ZWANCKE, OR EXPANDING PESSARY (Fig. 41), consists of two perforated wings of vulcanite, which can be folded together and opened out so that they form a platform, the two wings being connected by a hinge-joint. At right angles to the hinge there is a split stem, which is secured by a screw.

It is inserted in the following manner : the patient

lying in the left lateral position, and the displacement having been rectified, the screw is loosened, the wings approximated to each other, causing the two limbs of the split stem to lie widely apart.

The wing portion is then well vaselined and inserted into the vagina ; the index-finger of the right hand pushes the closed wings up as far as they will go ; the limbs of the split stem are next drawn together and fixed in position by means of the screw. When in position, the concavity of the stem should look forwards.

Fig. 40.
Albert Smith Pessary.

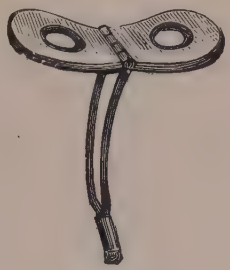

Fig. 41.
Zwancke Pessary.

The pessary thus forms a platform on which the prolapsed uterus rests. The Zwancke is most useful in those cases in which a ring or Hodge cannot be retained.

The patient must be shown how to put in the pessary and how to remove it, because the pessary must be removed every night, cleansed, and reinserted in the morning.

THE CUP-AND-STEM PESSARY (Fig. 42) consists

of a narrow column, with a pelvic curve surmounted by an expanded cup-shaped head, on which the uterus rests. The cup should be perforated with numerous small holes to carry off discharges. The lower end of the column or stem protrudes through the vulva, and has attached to it four bands of

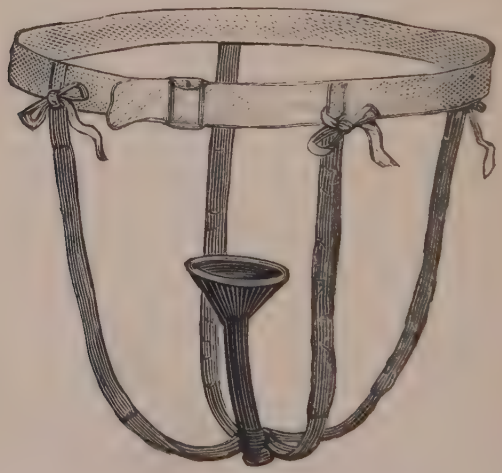

Fig. 42.—Cup-and-Stem Pessary.

rubber, two of which pass anteriorly and two posteriorly. These are secured to a belt fastened round the waist. The cup and stem are made either of soft rubber or of vulcanite. The latter is better: a soft rubber deteriorates very quickly and gives rise to foul discharge; it is also less efficient in keeping the uterus up, as during straining the pessary bends or may be expelled.

The patient must be instructed how to insert and remove the pessary. This is best done with the patient lying in the dorsal position, with the knees raised. The displacement should be pushed up, and the cup, well vaselined, passed into the vagina, with the concavity of the stem looking forward ; when the pessary is in as far as it will go, the two anterior bands should be brought forward and fastened to the waist-belt, the two posterior bands being fastened to the belt behind. The rubber bands should have soft linen slips or cases ; they are more cleanly, and can be easily changed. At night the whole instrument should be removed, thoroughly cleansed, and left to soak in an antiseptic solution. The patient should douche thoroughly after the pessary has been removed.

This pessary is used principally in those cases where there is prolapse of the uterus and vaginal walls, and where the perineum is so deficient that a ring or any other form of pessary cannot be retained ; or where, owing to age or ill-health, operative procedure cannot be undertaken.

CUTTER'S PESSARY (Fig. 43) is a modification of the cup-and-stem ; it is applied in the same way as the foregoing pattern. It only requires one strap to fasten round the waist, but the disadvantage is that it is a little more difficult for the patient to adjust.

Mode of Action of Pessaries.

Ring pessaries act only as a general support by keeping the vagina on the stretch. They lose their efficiency where there is much laceration of the perineal body. Sometimes they may have a lever action similar to the Hodge, and will prevent a retroflexed uterus which has been replaced from falling back again.

Fig. 43.—Cutter's Pessary.

The Hodge pessary acts like a lever. The posterior vaginal wall passes round the upper bar of the pessary, and is inserted into the cervix, which is pulled in an upward and backward direction, so that the fundus falls forwards. The pessary thus acts like the utero-sacral ligaments, which draw the cervix back and tilt the fundus forward. For an exaggerated action of the utero-sacral ligaments, see p. 162. The pessary also acts by supporting the uterus as a whole.

The Zwancke pessary acts simply by the fact that the expanded wings form a platform on which the uterus rests.

The cup-and-stem pessary keeps up the parts by means of the suspension from the waist-band.

Contra-indications to the Use of Pessaries.

Acute inflammatory conditions of the genital organs, such as ovaritis, salpingitis, cellulitis, endometritis, vaginitis ; fixation of the uterus so that the fundus cannot be raised ; tumours of ovary, tubes, uterus, or vagina.

In young unmarried women, unless the symptoms are so severe that the application of a pessary is necessary to relieve or cure.

RETAINED PESSARIES.—It is by no means uncommon to find cases where it has been completely forgotten that a pessary is being worn. The patient may complain of a purulent discharge, even of incontinence of urine, and only when an examination is made and a pessary found will the fact be recalled that this was inserted some years previously.

In many instances pessaries have been inserted by medical practitioners without the knowledge of the patient. No instructions have been given as to douching, and as a result the discharge becomes purulent and offensive, and advice is sought for the foul discharge. The vaginal walls may become ulcerated, and the pessary rest in the groove thus

formed ; the tissues may grow over the instrument. and it becomes embedded in the vaginal wall. The ulceration may proceed to such an extent that the bladder is opened into and a vesico-vaginal fistula results, or it may be that the posterior wall of the vagina is invaded, and leads to the formation of a recto-vaginal fistula.

The removal of a pessary in these conditions is not always an easy matter. In some cases the pessary cannot be removed without considerable violence, and it may even have to be dissected out. In those cases in which the pessary has eroded into the bladder its surface becomes encrusted with urinary deposits, which tend still further to fix it. When it is found that the discharge for which the patient seeks advice is due to a retained pessary, this should be removed at once, and the patient subjected to a course of douching ; if a fistula has resulted, this should be repaired.

The following points should be attended to when a pessary has been inserted :

The patient should be asked whether there is any pain or discomfort (it may be here remarked that if a pessary is properly adjusted, a woman is not conscious of its presence other than by the relief of symptoms), and should be asked to ' bear down,' cough, or strain, so that it may be determined whether the pessary fits. The patient should then be asked to rise from the couch and to again bear down while in the erect, squatting, and walking

positions. A further examination is then made in the left lateral position.

Except in the cases of Zwancke and cup-and-stem, no part of the pessary should protrude through the vulva. It should not press against the symphysis pubis nor the urethra. The upper end should not push up the posterior fornix too much. The vagina should not be unduly stretched in the transverse direction by a ring, and not at all by the Hodge and its modifications.

A pessary should not press on any of the bony points of the pelvis. If a pessary causes pain or discomfort by stretching the parts, it is too large, and should be removed. If the pessary is too small, the relief will be incomplete, and possibly the pessary will be extruded when the patient strains.

Definite and explicit directions should be given to every woman who has had a pessary placed in the vagina. She should be told to return if she has any discomfort or pain. She should have a daily douche (for formula see p. 124), and it ought to be clearly pointed out to her that a pessary is as much a foreign body as a plate with artificial teeth, and needs as much attention.

When the pessary worn is a soft rubber ring, instructions should be given for its removal, cleansing, and reinsertion at least once in three months. If a Hodge (or any of the modifications) of hard vulcanite, celluloid, aluminium, or tin, pro-

vided a douche is regularly taken, once in four or five months will be often enough.

The Zwancke and cup-and-stem must be removed and cleansed every night, and the vagina douched after the pessary is withdrawn.

If a pessary has been inserted for retroversion, retroflexion, or prolapse, and the patient becomes pregnant, the pessary should be removed after the fourth month of pregnancy, and not reinserted.

MEDICATED PESSARIES are frequently used, and are of great service. It should be remembered that the vaginal mucous membrane absorbs but slowly, and that double the usual dose is required. The basis should be of Gelatine or of Ol. Theobroma.

Vaginal pessaries are usually made in the size of 1 drachm or more.

The following are those in general use :

Sedatives.

Morphia	gr.i.
Cocaine	gr.ii.
Atropine	gr. $\frac{1}{20}$.
Bellad. Alcoholic Extract	gr. $\frac{1}{20}$.
Ext. Hyoscyami	gr.v.
Ext. Conium	gr.v.
Ext. Cannabis Ind.	gr.ii.
Potas. Bromid.	gr.xx.

Emollients.

Bismuth Oxychlor.	gr.x.
Borax	gr.xx.
Zinci Oxidi	gr.x.
Acidi Borici	gr.x.

Hæmostatics.

Sulphate of Iron	♏x.
Adrenalin	1-1,000.

Astringent.

Alum	gr.xx.
Acidi Gallici	gr.xv.
Plumbi Acetatis	gr.x.
Tannin	gr.xv.

Alterative.

Ichthyol	10 per cent.
Plumbi Iodidi	gr.v.
Atropin	gr. $\frac{1}{20}$.

Antiseptic.

Eucalypti Olei	♏xxx.
Iodoformi	gr.v.

The above pessaries are made up in the usual cone shape.

A better and more efficient means of applying drugs to the vagina is the ovule form (Fig. 44),

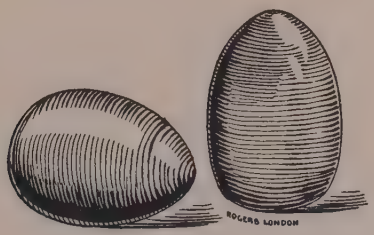

Fig. 44.—Gelatine Ovules.

prepared by F. A. Rogers ; any of the drugs mentioned can be incorporated in the ovule.

Another and very convenient method may be found in the tampon made by Pond's Tampon Company (see Fig. 45). The only objection is their cost ; they are very expensive.

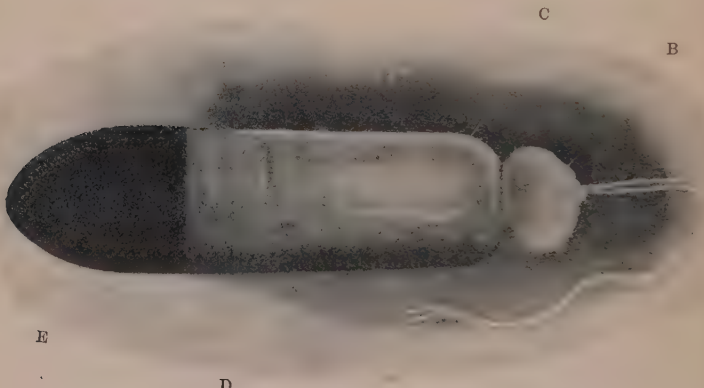

FIG. 45.—POND'S TAMPONS.

A, String ; B, protruding wool ; C, gelatine capsule ; D, compressed wool ; E, medicated pessary.

They may be had containing the following drugs, and in three different sizes (large, medium, and small) :

1. Ichthyolatum, 50 per cent., which contains :

Ichthyol	2½ per cent.
Iodine	2 per cent.
Acidi Carbolici	½ per cent.
Ext. Hydrastis Liq.	5 per cent.

(This is antiseptic and astringent.)

2. Ichthyol .. .. 10 per cent.

(Alterative.)

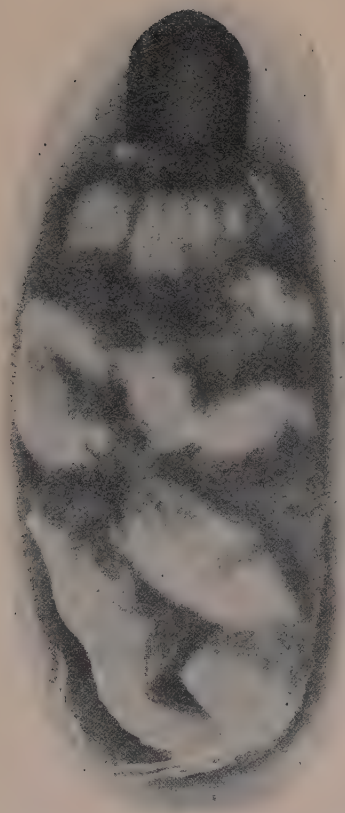

FIG. 46.—TAMPON AFTER MELTING OF GELATINE CAPSULE

3. Protargol } .. .. āā 2 per cent.
   Ichthyol }
   (Antiseptic, astringent.)

4. Opium .. .. gr.ii.
   Belladonna .. .. gr.i.
   Hyoscyamine .. .. gr.ii.
   (Sedative and anodyne.)

5. Glycerol of Tannin .. .. .. 50 per cent.
   (Astringent.)

Method of Using.—The tampon should be dipped for a moment in warm water, and then passed as far as it will go into the vagina in the direction of the posterior fornix ; the string should remain outside. The patient should be instructed to wear a pad over the vulva to protect her garments. The following morning the wool should be withdrawn and the patient given a douche suitable to the nature of the case.

A medicated pessary should be passed into the vagina and pushed up into the posterior fornix after the evening douche ; the patient should be given the same directions as above.

CHAPTER XIII

TREATMENT BY VACCINES AND SERA

VACCINES

The treatment of gynæcological affections by the various vaccines and sera has not been extensively employed by gynæcologists in this country, but the encouraging results obtained by the few who have used them warrant their inclusion in these pages.

To Sir Almroth Wright belongs the credit of first suggesting and carrying out the treatment of certain bacterial infections by vaccines.

Therapeutic immunization is brought about by the setting free of bacterial products in the organism. As an example, if a patient suffering from some bacterial infection undergoes spontaneous cure, we may assume that there has been an escape of bacterial products into the circulation. This is termed 'auto-inoculation.' Presumably, as a spontaneous recovery took place, a sufficient quantity of bacterial products passed into the circulation to bring about immunization; on the other hand, should the patient not recover, we should say that immunization had not taken place. It is here that vaccines have been

found useful, and they are used to bring about this condition of immunization, so-called 'therapeutic immunization.'

Such a vaccine may be prepared from a direct cultivation of the bacteria affecting the individual patient (autogenous). A stock vaccine of the same micro-organism may be used, but, generally speaking, it is better to use the vaccine obtained direct from the bacteria of the patient.

At the present time there are only a few conditions which lend themselves to treatment by the practitioner; these may be termed the 'open infections.' such as occur in acne, erysipelas, and furunculosis. Stock vaccines may be used in these conditions.

Dosage.—No hard-and-fast rules can be laid down. The vaccines (stock) are put up in sealed bulbs of about 1 c.c. and bottles of 25 c.c., but the dilution varies with the particular micro-organism. Thus, in staphylococcus vaccine the dilutions are 100, 500, and 1,000 millions of staphylococcus per c.c. It will be seen that there are three doses—a small, a medium, and a large.

Where the condition is an open infection—*e.g.*, furunculosis—and one which, therefore, can be observed clinically by inspection and palpation, the dose may be found by first giving a small dose. If this be followed by an immediate improvement, but a relapse after a few days, it is shown that the dose was insufficient, and a larger one should be given.

On the other hand, should it be found that there

has been a decided set-back after the inoculation, the dose has been too large, and less should be given at the next inoculation. Reinoculation is called for when the effects of the previous inoculation are beginning to pass off.

If the small dose has been used, reinoculation may be required again in forty-eight hours ; in the case of the medium, in a week or ten days. The intervals gradually get longer, owing to the gradual extinction of the infection.

Without question, the best way of determining the dosage and the effect produced on the organism by the vaccine is by proper observation of the opsonic index ; a series of measurements should be made.

This applies with greater force to those cases of ' closed infection '—that is, where the nature of the infection is uncertain. Wright very correctly says that the treatment of immunization is best undertaken by one ' who has at his command whatever knowledge and technique may be required for identifying the microbe in both " open " and " closed " infections, for gauging the gravity of each infection, for determining whether a dose of vaccine is too large or too small, for ascertaining whether the time has arrived for reinoculation, and for satisfying himself—when, as a result of the treatment, the overt symptoms of the disease shall have disappeared—whether the infection has been completely extinguished.'

METHOD OF USING THE VACCINES (STOCK).—A hypodermic syringe, capable of thorough sterilization with a 20-minim or a 1 c.c. graduated in tenths or twentieths.

The bulb containing the vaccine should be thoroughly shaken, the glass top sterilized in a flame; the point of the bulb should then be broken off with a pair of sterilized forceps, the needle of the syringe inserted into the bulb, and the fluid drawn up into the syringe, care being taken to keep the opening of the needle below the surface of the fluid during the whole process. The dose required should be measured off on the piston.

With a little cotton-wool, a fold of skin and subcutaneous tissue should be picked up from the flank, thigh, shoulder, back, or cheek of the patient, and some pure Lysol dabbed on the skin just at the spot where the needle is to be inserted. The needle should be pointed down into the middle of the fold. After it has been withdrawn, the skin should be carefully dried and freed from Lysol, and some Collodion applied.

Of the conditions in gynæcological practice which lend themselves to treatment by vaccines, frequent mention has already been made in these pages. To recapitulate, furunculosis, abscesses of the external genitals, vaginitis (gonorrhœal or other coccal forms), cervicitis, endocervicitis, endometritis, salpingitis, cystitis, tuberculous affections—any and all, judging from results published, should be amenable to vaccine therapy.

At present, however, very few of these cases can be treated by the practitioner, the necessary time, care, and intimate knowledge of bacteriological technique required in the proper management of these cases being far beyond his scope. The reader who desires a more intimate knowledge of this fascinating subject is referred to Sir Almroth Wright's book on 'Studies on Immunization.'

TREATMENT BY SERA

The use of the various preparations of sera, since the introduction of diphtheric antitoxin, in the various forms of septic infection is well known, but vaccine therapy is likely to take its place as being more scientific, more accurate, and more controllable.

The preparations of antistreptococcic, antistaphylococcic sera, and other varieties which have been, and are still, extensively used in the various infections, and the method of using them, are sufficiently well known, so that it is not thought expedient to enter into the details of the usual method of administration, nor to mention the various conditions in which they are used. But there is a method of giving the sera which is not so much used as it might be, and that is the administration by the mouth and rectum. Larger doses are required than when given by the hypodermic method. It is a moot point whether the advantages which sometimes certainly accrue from exhibiting the serum in this manner

are due to the antitoxic element, or simply to the effect of the plasma.

It is a well-known fact that the plasma of sheep and oxen are not only valuable foods, but have also a bactericidal action.

Antidiphtheric serum has been prescribed orally in numerous inflammatory and septic infections, with excellent results. Montgomerie Paton, in his book 'New Serum Therapy,' advocates the use of this serum in simple and septic inflammations, and also in chronic congestive conditions, and he quotes numbers of cases in which he has used the serum with uniformly good results.

The antidiphtheric sera which he uses are put up by Parke, Davis and Company—one a low-potency serum in 1-ounce bottles, containing 6,000 units; and a second with greater antiproteolytic power for chronic suppuration. The dose is the same with each serum.

In acute conditions he recommends 1 drachm of serum at once, and repeated every hour for three or four doses, then every four hours as required; for less acute cases, 1 drachm four times daily.

The gynæcological affections in which it has been found useful are: furunculosis, acne, dysmenorrhœa (congestive type), endometritis, menorrhagia and metrorrhagia, subinvolution, and salpingitis.

There is no doubt that the treatment of inflammatory and septic infections by the use of antidiphtheric serum, as recommended by Montgomerie

Paton, is a method which is easier of adoption by the practitioner than that of vaccine therapy ; the latter, as has already been pointed out, requires considerable knowledge of bacteriological technique, careful observation of the opsonic index, and altogether an amount of time which the general practitioner rarely has at his disposal.

Vaccine therapy must therefore necessarily remain in the hands of the few, while serum therapy, as advocated by Montgomerie Paton, can be carried out by all.

CHAPTER XIV

PERIMETRITIS AND PARAMETRITIS

PERIMETRITIS (**Pelvic Peritonitis**) is an acute or chronic inflammation of the pelvic peritoneum, and is caused, in the majority of instances, by microbial infection.

Treatment—*Prophylactic.*—As pelvic peritonitis is practically nearly always due to infection by micro-organisms or their products, it will be readily understood that the utmost care is demanded in all operative treatment undertaken on the vagina and uterus.

Absolute asepsis is to be observed, both before and during operation on the genital tract. The sound should never be passed into the uterine cavity, either for the purpose of diagnosis or treatment, without first being made aseptic, either by boiling or passing through the flame of a lamp.

Gonorrhœa should be treated promptly (*cf.* p. 102), before the infection has had time to reach the cervical or uterine cavity.

Acute.—Rest in bed is, of course, to be insisted on. The diet should at first be chiefly a liquid one :

milk mixed with Vichy, Seltzer or soda water—iced, if the patient prefers it — strong soups, beef-tea, or meat extracts.

Stimulants may be required, but only if the pulse shows signs of weakening. They should then be given in full medicinal doses—$\frac{1}{2}$ ounce of brandy, well diluted, every two or three hours.

For the relief of pain hot fomentations should be frequently applied. Aspirin in 5-grain doses every ten minutes, until three have been taken, will be found useful. If the pain is very acute, it may be necessary to give Morphia. This should be given hypodermically in $\frac{1}{4}$-grain doses, and combined with Atropine, $\frac{1}{150}$ grain ; but all other means should be tried first, as Morphia tends to constipate, and the accumulation of fæces, with consequent bowel distension, is the last thing to be desired.

The bowels should be kept open with enemata or aperients — Castor oil (1 ounce), or Compound Liquorice Powder (1 to 2 teaspoonfuls), or Calomel, in 1-grain doses every hour until 4 grains have been taken.

If there is much intestinal distension, turpentine enemata should be given, or the rectal tube may be passed.

A hot vaginal douche, three or four times a day for ten minutes at a time, should be used at a later stage, when the patient's strength is improved. Tincture of Iodine may be used in the douche (1 drachm to 1 pint). The douche serves to keep

the vagina clean, and has an antiphlogistic action.

Chronic.—Rest in bed until temperature is normal and the patient is free from all pain and discomfort.

The bowels should be kept freely open by salines (see prescription, p. 29). Counter-irritation, either by blisters or painting the lower abdomen with Tincture of Iodine. The Iodine should be applied every second day until the skin is sore.

Hot vaginal douches (temperature 115° F.) for twenty minutes should be ordered twice daily, and an ovule of Ichthyol and Gelatine (see p. 147), or a Pond's tampon of Ichthyolatum, should be inserted into the vagina after the evening douche.

Tonics should be given, especially Iron, either with Quinine or Arsenic. The following is a useful formula :

℞	Ferri Ammon. Cit.	gr.viii.
	Tinct. Quininæ	℥xx.
	Elixir. Aurantii	ʒss.
	Aq. Flor. Aurantii	ad ℥ss.

M. Sig.: A tablespoonful in water three times daily.

Or the Bi-palatinoid of Oppenheim may be prescribed :

℞	Ferri. Carb.	gr.ii.
	Sodii Arsen.	gr.i.-xxxii.

M. Sig.: One Bi-palatinoid three times daily.

PARAMETRITIS (Pelvic Cellulitis).—Pelvic cellulitis, or parametritis, is inflammation of the pelvic

connective tissue, and is most commonly the result of septic infection. Occasionally it may be due to chill ; a douche of cold water after coitus has been known to produce it.

The changes are practically the same as in septic inflammation of the connective tissues in other regions. In the acute stages the patient should be in bed ; the bowels should be kept freely open by means of a saline purgative ; the Magnesium Sulphate mixture (p. 29) should be given three times a day. Hot fomentations should be placed on the abdomen, and renewed every four hours. Hot vaginal douches (115° F.) should be given two or three times daily.

Later, vaginal tampons of either Glycerine or Ichthyol and Glycerine should be inserted in the vagina, and pressed gently up to the vaginal roof after the hot douche. If the tampons cause the patient great discomfort, Pond's tampon (p. 148) or an ovule of Ichthyol and Gelatine (p. 147) may be used instead. In the more chronic cases, when dense and almost plaster-of-Paris-like exudation is present, in addition to the hot douching, the temperature of which should be gradually raised to 120° F., Mercury should be administered, but *not* to the point of salivation.

℞ Liq. Hydrarg. Perchlor. . . . . ♏xxx.
Liq. Sarsæ Co. . . . . ℥ii.
Aq. Dest. . . . . ad ℥ss.

M. Sig. : A tablespoonful in water three times daily.

At a still later stage Potassium Iodide may be combined with the mercury.

℞ Liq. Hydrarg. Perchlor. .. .. ♏xxx.
Potassi Iodidi .. .. gr.x.
Liq. Sarsæ Co. .. .. ℥ii.
Aq. Dest. .. .. ad ℥ss.

M. Sig.: A tablespoonful in water twice daily after food.

Should suppuration occur and become localized, an incision should be made, and the abscess drained. Iron and Quinine should be administered.

℞ Tinct. Ferri Perchlor. .. .. .. ♏xv.
Quin. Hydrochlor. .. .. .. gr.iii.
Glycerini .. .. ℥ss.
Aq. Flor. Aurant. .. .. .. ad ℥ss.

M. Sig.: A tablespoonful in water three times daily after food.

Or:

℞ Ferri et Quininæ Citratis .. .. gr.v.
Glycerini .. .. ♏xx.
Spt. Chloroformi .. .. .. ♏x.
Aq. Dest. .. .. ad ℥ss.

M. Sig.: A tablespoonful in water three times daily after food.

There is a particular form of pelvic cellulitis which is worth special mention—namely, the cases in which the utero-sacral ligaments are affected. This is an extremely common condition, and gives rise to many symptoms, chiefly dyspareunia and dysmenorrhœa and reflex gastric disturbances.

The utero-sacral ligaments, when inflamed, become shortened, and pull on the uterus at their points of insertion—that is, about the isthmus. This

causes the fundus to fall forward, so that an acute anteflexion is produced.

In fact, it may be safely said that, if the uterus of a parous woman be acutely anteflexed, it will be found that the utero-sacral ligaments are shortened by inflammatory infiltration.

If treatment be applied, as suggested above, not only do the local symptoms disappear, but the reflex gastric affection will also clear up.

CHAPTER XV

THE MENOPAUSE

The 'change of life,' also called the climacteric, occurs usually between the ages of forty-five and fifty. In some cases it may occur prematurely; in others it may be unduly prolonged. It is said to be later in cold climates and in the higher social classes.

Racial characteristics are seen, as in Eastern people, when the menopause is usually early.

The menopause may take place in the following manner: The menstrual flow gradually gets less and less, and then stops altogether; or the catamenia may stop for a few months, and then recommence, with perhaps smart hæmorrhage, to be followed by another period of amenorrhœa and irregular hæmorrhages. This is the most frequent variety met with in practice.

It may cease suddenly. This is very uncommon.

The local structural alterations are important, and are as follow:

1. The ovaries shrink; they are harder and smaller. The Graafian follicles are destroyed; the connective tissue increases in quantity. There is cessation of their functional activity.

2. The Fallopian tubes become narrower, shorter, and the lumen is obliterated.

3. The uterus becomes smaller ; the musculature practically disappears ; the walls are thinner. The cervix is shortened, and feels like a button in the vaginal roof. The cavity may become obliterated throughout ; the mucosa is thinned, and the glands destroyed.

4. The vagina becomes conical in shape, the fornix obliterated ; it is shortened ; the rugæ disappear, and the walls lose their elasticity. It becomes pale in colour. There is a tendency for the epithelium to be lost in patches. There is contraction of the introitus vaginæ.

5. The vulva and labia lose their fat, the labia becoming thin folds of skin. The skin surface becomes dry and scaly.

6. The breasts may become thin and flabby ; there is loss of the glandular elements.

The whole of the change may be summed up in the word ' atrophy.'

So much for the local structural changes ; but not less important are the general symptoms—mental, sensory, and circulatory, etc. Mental disturbances are very common—despondency, melancholia, irritability. Sometimes suicidal tendencies are developed. It is noteworthy that the whole temperament of a woman may change : a placid nature may become irritable and impatient, or an individual of an irascible disposition may become

calm and subdued; or, as an eminent authority once put it, 'Angels become devils, and devils become angels.'

Palpitation, heats, and flushings are very common. The latter may affect any part of the body, but most frequently the face and head, and they are more marked in nervous and excitable women. Sometimes feelings of chilliness follow these flushings. Headache, migraine, and vertigo are frequent. On the other hand, women who have been martyrs to these conditions become cured by the climacteric.

Obesity is very common at the menopause.

Treatment.—Attention should be directed to the general health. The patient should be encouraged not to dwell upon the symptoms. The bowels should be kept freely open with salines. Alcohol should be forbidden. The patient should be assured that there is no more risk of the reason being lost at this time of life than at any other. So many women seem to have this impression that an assurance on the subject by her medical adviser will always have a good effect.

For the nervousness, palpitation, and flushing the following prescription is of great value:

℞ Ammon. Bromid. .. .. .. gr.x.
Tinct. Digitalis .. .. ♏v.
Elixir. Aurant. .. .. ℥ss.
Tinct. Cocci Cacti .. .. .. ♏ii.ss.
Aq. Flor. Aurant. .. .. .. ad ℥ss.

M. Sig.: A tablespoonful in water three times daily immediately after food.

If there is a tendency to hæmorrhage as well as to flushing, the following may be given :

℞	Ammon. Bromid.	gr.x.
	Ext. Ergot. Liq.	℥xxx.
	Tinct. Digitalis	℥iii.
	Elixir. Aurantii	℥ss.
	Aq. Chloroform.	ad ℥ss.

M. Sig. : A tablespoonful in water three times daily after food.

In the irregular bleedings neutral Cotarnine Phthalate in the form of Styptol or Lodal may be given.

In a certain number of cases Ovarian Extract gives good results. It may be prescribed in tabloid form, 5 grains three times daily.

If the hæmorrhages at the menopause are severe, it is the bounden duty of the practitioner to examine his patient, and this applies with special force to any hæmorrhages or other discharge occurring *after* the menopause is definitely established. This cannot be too strongly insisted upon. The most thorough, careful local examination is an absolute necessity, for it must ever be borne in mind that in the great majority of cases in which hæmorrhagic discharges occur after the menopause malignant disease is likely to be present, and the earlier this is recognized the better, so that the patient may be given the opportunity of having the affected organ removed before the disease has become too far advanced for surgical relief.

HYGIENE

NUTRITION.—Overfeeding and improper feeding are as much to be guarded against as insufficient feeding. The diet should be plain, nutritive, and wholesome, and should be taken at regular intervals. The fads and fancies which many women have in the matter of food are to be avoided. Anæmic and chlorotic girls in particular have to be carefully watched in this direction.

Definite instructions should be given by the practitioner as to the kinds of food, the quantity, and the intervals at which meals should be taken. Tea and coffee should be taken in moderation ; alcohol is never necessary, and should not be prescribed.

Care of the teeth is of the utmost importance, and it is useless to expect a woman to assimilate food if the teeth are faulty. The number of cases of malnutrition which are due solely and wholly to defective teeth is astonishing. The teeth are either carious or missing. Too often it is seen that a patient has a perfect set (either her own or artificial) of front teeth, but careful inspection will reveal molars decayed or absent, a good appearance being apparently preferred to utility. Not infrequently the gynæcologist is consulted for amenorrhœa, which, on careful examination, will be

found to be due to malnutrition consequent upon decayed teeth and a septic condition of the mouth.

BATHING should be looked upon as a necessary part of the toilet. If it can be borne, the bath should be cold, followed by a brisk rubbing down with rough towels. Should the skin not respond, and the body remain cold, then it is better to take the bath either with the chill off or warm.

The following will be found a useful and refreshing adjunct to the daily bath :

Take 2 cupfuls of ordinary household vinegar, and add them to a basinful of tepid water. After the body has been well soaped, a sponge is dipped in the vinegar solution, and the soap sluiced off, and the body briskly dried.

Should the daily bath be taken during the menstrual period ? There is no reason at all why the bath should be omitted, although it is quite a common idea among women that bathing should be avoided at these times. Cold bathing is not advisable, but the patient may take a warm bath, and is, indeed, all the better for it.

SLEEP.—Eight or nine hours are necessary for young, growing girls. The bedroom should be clean, well ventilated, the windows being left wide open. The clothing should be warm, but not too heavy.

EXERCISE is to be taken regularly. The form in which it is to be taken depends a great deal upon the individual, and is best left to the judgment of the practitioner. Exercise should never be taken

to the point of extreme fatigue, especially in young girls and in those at or near puberty. Walking is a good form of exercise in which all healthy women can indulge. Tennis, swimming, golf, hockey, skating, and cricket, are all pastimes in which the modern young woman excels. Is exercise to be taken during menstruation? Unless the individual suffers from dysmenorrhœa or menorrhagia, there is no reason why exercise should be curtailed. Many women engaged professionally—*e.g.*, dancers, acrobats, etc.—find no necessity to abstain from their work during the period, and are none the worse; and a healthy young girl accustomed to exercise in the open air should have still less reason for giving up her games.

CLOTHING.—It is almost unnecessary to say that corsets are undesirable, and the cause of many ailments of the female sex. Volumes have been written on the evils of corsets, yet there are still corsetières, and are likely so to be, so long as woman is a slave to the dictates of fashion. The European woman laughs at the distortion of the Chinese lady's feet, and calls it barbarous: could she but see the distortion of her own organs consequent on the use of corsets, she might realize that her Chinese sisters were not one whit more barbarous.

Underclothing should be warm, and in the form known as 'combination.' These may be made of silk, wool, or a mixture of both. A very excellent material is that known as 'cellular.' Stockings

should be warm, and fastened with suspenders, not garters. Drawers should be of linen, and should be worn closed; or what are known as divided skirts or knickerbockers should be worn. The external genitals are exposed to cold, dust, and all sorts of infective material with the ordinary underclothing, and should be suitably protected.

All weight of skirts, etc., should be supported as much as possible from the shoulders, and not from the waist.

BOOTS AND SHOES should be strong, and made to the shape of the feet, not the fashionable, pointed, high-heeled shoe.

These are suggestions which have been made by various authorities over and over again, but it is still as necessary to call attention to the errors in women's clothing as ever it was.

MASTURBATION

The medical practitioner is not likely to be consulted by adults for this condition, his advice more often being sought in the case of children.

In very young children masturbation is usually the result of local irritation—*e.g.*, a long prepuce, with retained secretion. Worms frequently lead to the habit ; vaginitis is another cause. In older patients local irritation may also be the causal factor, due to retained secretion. Leucorrhœal discharge, pruritus, parasites—in fact, anything which leads to scratching or manipulation of the parts—may induce the habit.

It is well worth noting that the act is not always produced by digital friction. Not infrequently the mother will mention that the child's hands have been gloved, and the sleeping-suit adjusted in such a way that handling of the parts has been completely prevented. In point of fact, as far as very young children are concerned, masturbation is effected by thigh-rubbing. The child is generally seated, the thighs are tightly compressed, the body is swayed backwards and forwards, the face is flushed and excited-looking, the breathing is short and quick ; the climax ends with deep breaths and sighs, the eyes staring and fixed—indeed, it

is only by the facial expression of the child that the condition is actually recognized.

In older girls the digital friction of the clitoris, prepuce, or nymphæ, is the method employed, though pressure by means of crossed thighs is frequently used to cause the orgasm.

Treatment.—Obviously, the first course is to remove all source of irritation ; absolute cleanliness of the parts is to be insisted upon. The child should be reasoned with ; the uncleanliness and debasing effect of the habit should be made clear to her ; opportunities of practising the act should be avoided. The child should never be left alone. When put to bed, she should be watched until she is sound asleep, and looked at from time to time. The greatest tact and patience is required ; but it is wonderful how quickly a young child may be broken of the habit, if once she is made to understand how bad it is for her.

Drugs are not of much value in the treatment of this affection ; scrupulous cleanliness is all that is required locally. The rest of the treatment remains in the hands of the mother or guardian of the child, and this consists in gaining the confidence of the little one, the exercise of much patience and tactfulness, to put before it the evils of the habit, and to aim at a high ideal.

In older patients, in addition to cleanliness and the removal of any cause of local irritation, everything should be done to encourage a healthy, open-

air life. Exercise should be taken to the point of fatigue ; the bowels should be kept thoroughly well open ; plain food and no alcohol ordered. Warm baths should be prohibited, and the patient should be made to take them cold, followed by a brisk rubbing. In those cases where the patient seeks for help in overcoming the habit drugs are permissible. Bromide combined with Valerian is often of great use.

℞ Tinct. Valerianæ Ammon. .. .. ℥ss.
Tinct. Bellad. .. .. ♏v.
Ammon. Bromid. .. .. .. gr.x.
Aq. Dest. .. .. ad ℥ss.
M. Sig. : A tablespoonful in water twice daily.

Salix Nigra, or Black Willow, is another useful drug, and may be given in doses of (the liquid extract) from 1 to 2 drachms.

℞ Ext. Salicis Nigræ Liq. .. .. ℥i.
Potass. Bromidi .. .. gr.x.
Elix. Aurant. .. .. ℥ss.
Aq. Flor. Aurant. .. .. .. ad ℥ss.
M. Sig. : A tablespoonful in water twice daily.

It is well to remember that increased sexual desire, with the practice of onanism, is very frequently associated with early tabes and insanity. In the latter condition this habit is often the first symptom noted, and it may be here pointed out that masturbation is not a cause of insanity, but is rather a symptom.

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THE END

BAILLIÈRE, TINDALL AND COX, 8, HENRIETTA STREET, COVENT GARDEN